ECONOMICS OF FLORIDA'S BEACHES:

THE IMPACT OF BEACH RESTORATION

Ft. Lauderdale Beach

Bradenton Beach

Ft. Myers Beach

Pensacola Beach

Beach at Key West

Panama City Beach

Daytona Beach

Jacksonville Beach

JUNE 2003

ECONOMICS OF FLORIDA'S BEACHES:

THE IMPACT OF BEACH RESTORATION

Prepared for:
Florida Department of Environmental Protection
Bureau of Beaches and Wetland Resources
DEP Contract No. BS014, Final Project Report for
Economic Benefits Analysis/Florida Beach Restoration

Prepared by:
Catanese Center for Urban and Environmental Solutions
at Florida Atlantic University

James F. Murley
Lenore Alpert, Ph.D.
Mary Jean Matthews
Christina Bryk
Brady Woods
Angela Grooms

Consultants:
Debbie Flack
Bill Stronge, Ph.D.

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PREPARED FOR

THE BUREAU OF BEACHES AND WETLAND RESOURCES

OF THE FLORIDA DEPARTMENT

OF ENVIRONMENTAL PROTECTION

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for Urban & Environmental Solutions
at Florida Atlantic University

FDEP Economics of Beaches: Executive Summary

INTRODUCTION

The Bureau of Beaches and Wetland Resources of the Florida Department of Environmental Protection (FDEP) recognizes the need for improved public education and outreach on the importance of beach management to the state and national economies. An assessment of Florida's existing beach management program would be an essential first step in the process of educating decision makers, stakeholders, and interested individuals. Hence, a multi-purpose study designed to identify the costs and benefits of beach restoration, combined with a plan to enhance the information available, would advance this effort.

To this end, FDEP contracted with the Catanese Center for Urban and Environmental Solutions (Center) at Florida Atlantic University (FAU) for a comprehensive evaluation of the economics of beach restoration in Florida. The process of research, data gathering, and analysis undertaken by the Center is outlined immediately below and more fully described in the following executive summary. The Final Report encompasses Phase I: Project Inventory and Public Outreach, which consisted of an initial program review conducted pursuant to several tasks:

- Development of inventory and financial information
- Review of existing literature
- Preparation of outreach document
- Compilation of initial dataset
- Preparation and solicitation of FDEP review of report, including concept paper
- Solicitation of expert review of work products
- Transmittal of final report to FDEP

Today, both state and federal agencies, in particular FDEP and the U.S. Army Corps of Engineers (Corps), are realizing that a broader approach to analyzing the economic impact of beaches is necessary. They recommend a comprehensive economic analysis

that would include information on variables related to National Economic Development, Environmental Quality, Regional Economic Development, and Other Social Effects.

The Concept Paper, described below and developed in this study, outlines a proposed methodology using a model to predict the economic value of beach restoration. A statewide model could launch a program for testing the efficacy and availability of statewide variables first, proceeding to others as needed. The model would assist in the development of an informed management strategy that, among other objectives, could encourage regional approaches to shaping the future of Florida's beaches. This economic valuation methodology would enable such agencies as FDEP and the Corps to adhere to their legislative mandates and priorities.

PROCEDURES AND PRODUCTS

Development of Inventory and Financial Information

The Center's evaluation began with an inventory of Florida beach projects, including maintenance dredging and offloading placement of sand, performed between 1992 and 2002. Detailed information was collected on project sponsors; length, quantities, and number of placement events; life of the project; costs and cost-share formulas; nourishment cycles; mitigation components; estimates of storm damage reduction; authorization changes and expiration; and the contribution of maintenance dredging to the performance and success of the beach restoration.

This task also included identifying the distribution of State of Florida beach funding between 1992 and 2002. This information is highlighted in the Outreach Document, described below, and is detailed in the appendices to this report.

Review of Existing Literature

Center staff prepared a summary of all existing materials and literature on the economics of beaches and findings to date. The main emphasis was on Florida, although additional reports, articles, and related documents were collected from other parts of the country where beaches periodically undergo nourishment and restoration. Abstracts of

these materials were developed and the information was presented in a literature review format, accompanied by an extensive bibliography.

Preparation of Outreach Document

A full-color, four-page "Outreach Document" was drafted, reviewed by FDEP, and subsequently published for the purpose of educating public officials, stakeholders, and other interested individuals on the value of beaches to the state's economy. The brochure provided data, statistics, and other supporting materials on the Impact of Beach Restoration (including information on understanding beaches and the benefits of beaches), Reasons to Nourish Beaches (creation of jobs; tourism impacts from direct and indirect spending), Results of Healthy Beaches (contribution to government tax revenues), the Status of Florida Beaches (data on critically eroded beaches; upland habitat protection, wildlife and recreation benefits), and Funding Sources for Florida Beaches (federal, state, and local funding based on FDEP regions). An electronic copy and 500 printed copies of the brochure were submitted to FDEP for distribution.

Compilation of Initial Dataset

The dataset (presented in the appendices to this report) was developed from statistics obtained from FDEP and the Corps. Through a process of grouping and sorting agency data submitted in an Excel spreadsheet format, Center staff extracted the relevant information, which spanned the years 1992 to 2002. Following is the list of graphs and tables comprising the dataset:

- Funding for Florida beaches
- U.S. Army Corps of Engineers funding for Florida beaches
- Florida Department of Environmental Protection and U.S. Army Corps of Engineers funding for Florida beaches
- State – Federal – Local graphs comparing funding sources for Florida beaches
- State and local funding for beach restoration and nourishment
- State and local expenditures on inlet activities

- State and local expenditures on post storm activities
- State and local expenditures on feasibility and monitoring studies
- U.S. Army Corps of Engineers expenditures on Florida beaches
- U.S. Army Corps of Engineers maintenance dredging tables
- State and federal expenditure summaries by region
- Federal, state, and local beach-related expenditures by region and year

Preparation and Solicitation of FDEP Review of Report, Including Concept Paper

For this work, Center staff collaborated with Dr. William Stronge, an FAU faculty member who is an expert on beach economics. A synopsis or "Concept Paper" was prepared documenting the type of information needed to assess the economic benefits of restored beaches to the community, state, and nation. The paper presented a proposed methodology in the form of a statewide model that can trace the impact of beaches on the economy through the effects on tourism and property values. The same model, applied to individual projects, can be used to show the economic impact of the state's beach management program. Moreover, the model would assist in the development of an informed management strategy that, among other objectives, could encourage regional approaches to shaping the future of Florida's beaches.

The model can be developed by creating a clearinghouse for the compilation and analysis of data and other information already being gathered by different county and state agencies, supplementing these data in appropriate ways. A dataset that can be used for this purpose is collected by the state's tourism marketing agency, Discover Florida. A summary of the principal findings derived from this dataset is given in the *Florida Statistical Abstract*. The latest data show 62.3 million out-of-state visitors to Florida in 2001. There were an additional 8.0 million international visitors. Of the 62.3 million domestic visitors, a total of 22.4 million indicated that going to the beach was a primary activity during their stay in Florida. The report provides information on the characteristics of domestic tourists including party size, length of stay, and average

expenditures by type. However, such information is not broken out for the tourists who list going to the beach as a primary activity.

A standard economic impact model will chart the effects of tourist spending on the economies of the local area, the state, and the nation. Beaches provide direct and indirect benefits including, but not limited to, job creation, increased government tax revenues, improved storm protection, recreational benefits, and wildlife habitat protection. Storm damage reduction, for example, can result in improved values for both residential and commercial properties located nearby.

Gaps in extant research were identified in the Concept Paper that includes a table presenting the national and regional economic development variables examined in current studies. The table indicates that most studies focus on only a single variable, instead of encompassing all the research variables of economic valuation. An effective model incorporating many variables would be the most cost effective approach in the development of an informed strategy for coastal zone management by beginning at the state level. Such a model would have the potential for nationwide application. It should also be noted that interagency and intergovernmental cooperation would be essential to data gathering for a clearinghouse of information on the research variables under analysis.

The draft report and Concept Paper were submitted to FDEP and agency comments were addressed during preparation of the Final Report.

Solicitation of Expert Review of Work Products

Pursuant to contractual requirements, Center work products were submitted on a timely basis to FDEP and then to a panel of expert reviewers for comment.

Transmittal of Final Report to FDEP

The Final Report was submitted to FDEP in June 2003.

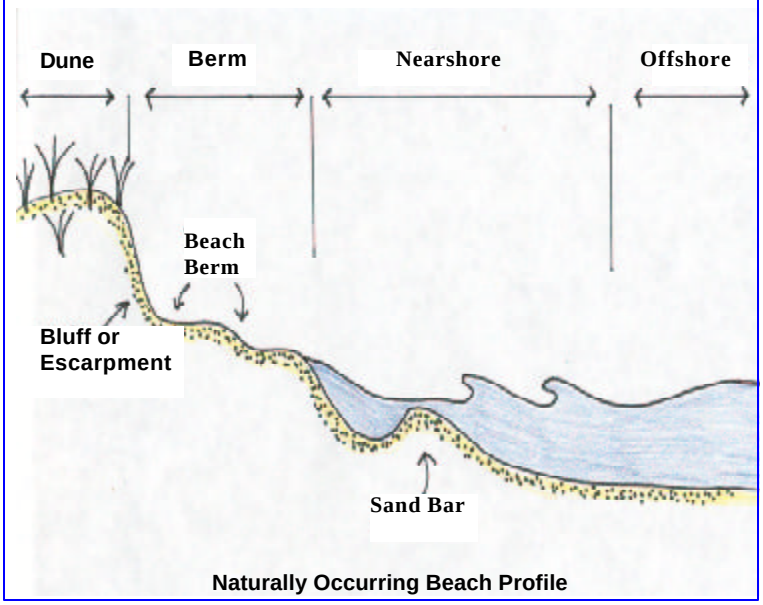
ECONOMICS OF FLORIDA'S BEACHES

THE IMPACT OF BEACH RESTORATION

Understanding Beaches

Florida is the nation's premier coastal state, dependent on its 825 miles of sandy beaches fronting the Atlantic Ocean and Gulf of Mexico for the enjoyment of its residents and tourists. Everyone cherishes beaches as important recreation areas for family outings and leisure activity. Beaches provide marine habitat for many species, including endangered and threatened species. Beaches also provide storm protection for public infrastructure and private upland development.

Equally important to Florida but less recognized are the substantial economic benefits that result from beaches. Beaches are Florida's primary tourist attraction. Beach-related tourism has a $41.6 billion annual impact on our state's economy. Beaches contribute to expanding federal, state, and local tax bases; increase sales, income, and employment opportunities from resident and visitor spending; and enhance property values.



Naturally Occurring Beach Profile

Beaches are dynamic land forms subject to both severe storm damage and man-induced erosion. As a result, they require protection, and in some cases repair. To suggest that beaches will survive if simply left alone or addressed only with stringent development regulations is to ignore the causes of erosion. Nature renourishes our beaches by depositing sand along the shore carried by currents known as littoral drift. Unfortunately, structures such as our navigation inlets and other coastal structures interrupt this process. As much as 80% of the erosion on Florida's East Coast is attributable to the navigation improvements and historical sediment management practices at our inlets, which have disrupted the natural flow of sand, virtually starving downdrift beaches. The engineering solution to this problem called "restoration and nourishment" imitates nature by bringing large quantities of sand by dredge and pipeline, or by inlet sand bypassing, to restore the natural flow of sediment.

Benefits of Beaches

- Enhance Property Values
- Increase Sales, Income & Employment
- Expand Federal, State & Local Tax Bases
- Protect Developed Shorefront from Storm Surges
- Prevent Loss of Upland
- Provide Habitat for Animals & Vegetation

Florida's beach management program, pursuant to Florida Statutes Chapter 161, the Florida Beach and Shore Preservation Act, provides for a variety of local government-sponsored erosion control activities (e.g. restoration, nourishment, inlet sand bypassing, dune repair and revegetation, erosion control structures, feasibility and design studies, and innovative demonstration projects). Restoration involves the initial placement of sand to rebuild a beach that has severely eroded. Beach nourishment, also referred to as renourishment or periodic maintenance, places sand at usually 5 to 10 year intervals on previously restored beaches to maintain original design intent, such as storm protection, recreational beach area, and habitat enhancement. As part of Florida's nationally-recognized beach management program, all major projects require physical and biological monitoring to document project performance and potential impacts.

The restoration of beaches is an often misunderstood and controversial subject. However, it is inarguable that beaches in many of Florida's coastal communities were virtually gone prior to restoration, as were the tourists, leaving billions of dollars of oceanfront development, infrastructure and habitat defenseless against the next major storm event.

The issue may be simplified by thinking of beaches like roads, requiring periodic "resurfacing" with sand. Some still argue that adding sand to the system is a costly folly, while others feel the return on investment far exceeds the cost. Further, for every $1 the State of Florida spends on beach management, that money is matched with $1 to $5 from local and federal sources, depending on the level of federal participation. Each state dollar spent protecting Florida's beaches with widespread public access prevents the loss of $8 in state taxes paid by out of state tourists and resident users of Florida's beaches.

LEGISLATIVE INTENT

"Because beach erosion is a serious menace to the economy and general welfare of the people of this state and has advanced to emergency proportions, it is hereby declared to be a necessary governmental responsibility to properly manage and protect Florida beaches fronting on the Atlantic Ocean, Gulf of Mexico, and Straits of Florida from erosion and that the Legislature make provision for beach restoration and nourishment projects . . ." [Florida Statutes 161.088].

REASONS TO NOURISH BEACHES

Importance of Florida Beaches to State Tourism

- The economic impact of Florida's beach visitors in 2000 included 442,000 jobs and **over $700 million in sales tax directly paid by Florida beach tourists.**
- Of the **71 million annual tourists who visit Florida**, over 23 million reported going to Florida beaches as a primary vacation activity during their stay.
- Direct spending by Florida's beach visitors in 2000 was estimated at $**21.9 billion**.
- Indirect spending by Florida's beach visitors in 2000 was estimated at **$19.7 billion.**
- Total spending by Florida's beach visitors in 2000 was estimated at **$41.6 billion.**
- Over $8 billion in payroll results from additional spending related to the state's beaches.

(Stronge, 2002)

Importance of Florida Beaches to State Residents

- Florida has an interest in mitigating impacts of inlets that cause ersoion. Over 80% of erosion on Florida's east coast is attributable to impacts of navigation inlets.
- Nearly 80% of Florida's residents live in coastal counties.
- Over 60% of Florida's population lived within five miles of the coast in 1995.
- Over $25 billion, or approximately 25% of the value of Florida's coastal real estate, can be attributed to beaches.

Beaches Fuel State's Tourism

"Travel and tourism contributed 16.5% of U.S. exports worth $196.3 billion in 2001" (World Travel and Tourism Council as cited by Houston, 2002). Notably, international tourism is the world's largest export earner, outstripping exports of any other product or service. Within our borders "Three of every four U.S. summer travelers plan to visit beaches" (Visit Florida as cited by Florida Today, July 28, 2002). Houston (2002) studied the economic impact of beach restoration on tourism and found that ". . . foreign tourists at Miami Beach alone pay more in Federal taxes than the Federal Government spends nationally on beach nourishment." Houston explained that tourism and travel is the largest employer, earner of foreign exchange and industry in the United States. The largest factor in travel and tourism is beaches. Tourist visitors to Miami Beach exceed those to Yellowstone, the Grand Canyon and Yosemite combined. Since the 1960s, federal investment has increased to approximately $100 million per year, compared with travel and tourism, which produces $223.9 billion in tax revenues annually (Houston, 2001).

Brian Flynn, who handles beach projects for Miami-Dade County, said: "When you depend on tourists and you don't have a beach, you have a problem." In the 1970s, a large restoration project began in Miami Beach, which changed the scarred and eroded shoreline to sandy beach. This ongoing project costs $2 million per year for maintenance and renourishment. (Clayton, B., July 28, 2002, Florida Today). Prior to the beginning of the project in 1978, Miami had roughly eight million visitors, compared with 21 million visitors afterward in 1983. Today in Miami Beach, these visitors spend $4.4 billion annually, including expenditures of $2.4 billion by foreign tourists (Houston, 2002).

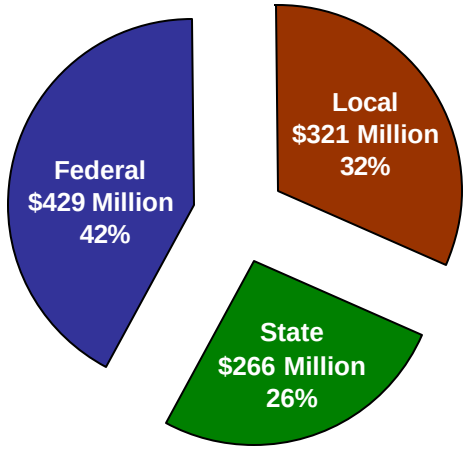
RESULTS OF HEALTHY BEACHES

Beach Tourists Generate Billions

Advocates of beach restoration, such as the Florida Shore and Beach Preservation Association, argue that investing in beaches is money well spent due to significant annual revenues from direct tourist spending. Beaches represent one of America's largest industries, contributing 12% or $1.2 trillion to America's gross domestic product (World Travel and Tourism Council as cited by Douglass, 2002). It is estimated that one in eight, or 17 million, American jobs are in travel and tourism.

The contribution of Florida's beaches to government tax revenues is impressive. These tax revenues provide millions of dollars annually to federal, state and local governments. Over 23.2 million tourists visited Florida beaches in 2000, spending $21.9 billion, resulting in an indirect economic effect of $19.7 billion and a total economic impact of $41.6 billion. Sales tax revenues generated from direct tourist spending was $700 million in 2000.

Contribution of Florida's Beaches to Government Tax Revenues (Stronge, 1998)



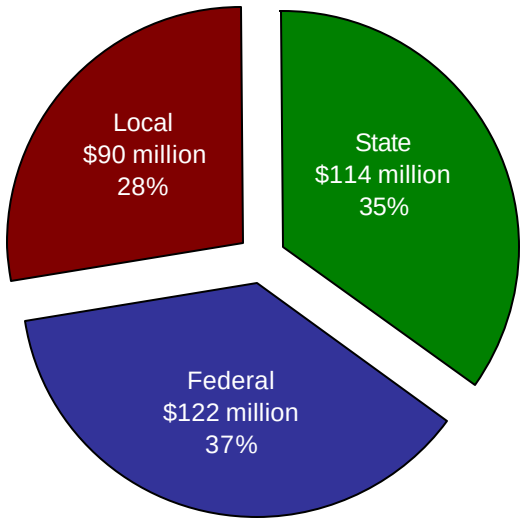
Note: Average property tax millages calculated for the regions from 1994 data; sales tax rate based on 3%, federal taxes based on applying a personal income tax rate of 7.4% to payroll impacts added to 23.6% to allow for corporate taxes, based on 1997 data.

STATUS OF FLORIDA BEACHES

DEP Quarterly Performance Report, Fiscal Year 2002-2003

79%	Beaches that Provide Upland Protection, Wildlife or Recreation According to Statutory/Rule Requirements.
48%	Critically Eroded Beaches under Management Plan and the percentage on which erosion has been reduced or reversed.

Sources of Government Funding for Florida Beaches, 1992-2002



Florida Beach Projects

A total of 91 beach projects are currently underway throughout Florida or completed since 1992. These involve 51 different government partners. Local government partners have contributed $90 million to beach projects. The federal government has contributed $122 million to Florida's beach projects since 1992. Over the past five years, about 55 miles of Florida's beaches have been nourished or restored; more than 27 miles of Florida's beaches were restored or nourished in 2002. The federal government has also placed 14 million cubic yards of sand on beaches as part of the maintenance of inlets since 1992.

BEACH VACATIONS PROFITABLE

- Compared with the average traveler, beach travelers take longer vacations, spend more money on trips and are more likely to spend extended amounts of time in the community by renting condominiums or timeshares.
- Beach vacations generate $850 per trip and half include shopping along with beach activity.
- Nearly four out of every ten U.S. households visit beaches and take a child on their trip.
- Overnight beach trips last an average of 5.9 nights, compared with an average of 4.1 nights for overall travel.

(Travel Industry Association of America, 2002)

Critically Eroded Beaches

Over 435 miles of Florida's 825 miles of sandy beaches have experienced erosion (State of Florida, Strategic Beach Management Plan, 2002). The total number of miles of eroded beach has increased by 104 miles since 1989, from 332 miles in 1989 to over 435 miles in 2002. In 1989, 218 miles of beach were critically eroded. At present, approximately 333 miles are designated as critically eroded. Such erosion threatens private or public development and infrastructure or significant cultural or environmental resources. It is caused "by both human coastal activities and natural forces" (Schmidt & Woodruff, 1999, Shore & Beach). Of the critically eroded shoreline in the state, just over 161 miles are being managed by the state (State of Florida, Strategic Beach Management Plan, 2002).

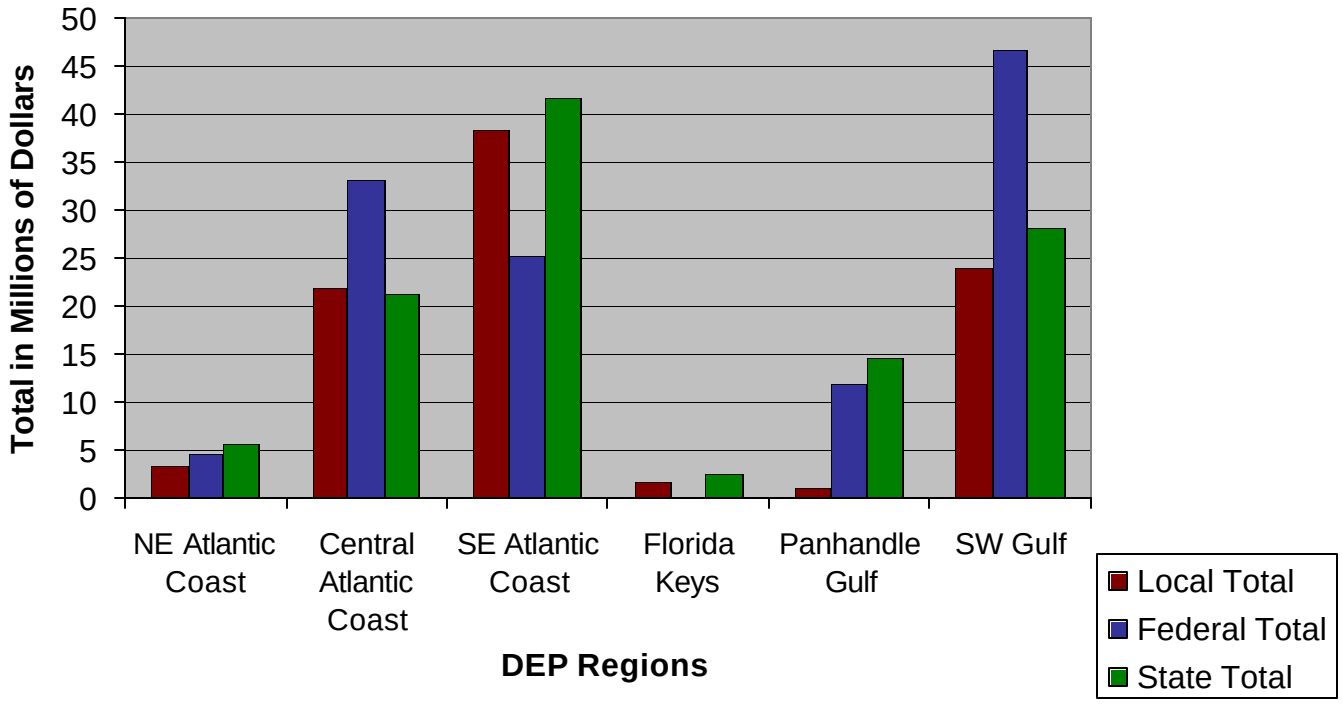
DEP Region	Critically Eroded Beaches	Percent Managed
Northeast Atlantic	45.7 miles	38.0%
Central Atlantic	55.8 miles	49.0%
Southeast Atlantic	69.0 miles	62.0%
Florida Keys	7.7 miles	8.0%
Panhandle Gulf	62.0 miles	29.0%
Big Bend Gulf	1.7 miles	0%
Southwest Gulf	91.0 miles	51.0%

LEGISLATIVE INTENT

"In accordance with the intent expressed in s. 161.088 and the legislative finding that erosion of the beaches of this state is detrimental on tourism, the state's major industry, further exposes the state's highly developed coastline to severe storm damage, and threatens beach-related jobs, which, if not stopped could significantly reduce state sales tax revenues, funds deposited into the State Treasury to the credit of the Ecosystem Management and Restoration Trust Fund, in the annual amounts provided in s. 201.15(8), shall be used, for a period of not less than 15 years to fund the development, implementation, and administration of the state's beach management plan . . . " [Florida Statutes 161.091(3)].

FUNDING SOURCES FOR FLORIDA BEACHES

Total Federal, State & Local Funding for Florida Beaches, 1992-2002



DEP Regions	Northeast Atlantic	Central Atlantic	Southeast Atlantic	Florida Keys	Panhandle Gulf	Southwest Gulf
Counties in the Region	Duval Flagler Nassau St. Johns Volusia	Brevard Martin St. Lucie/ Indian River	Broward Miami-Dade Palm Beach	Monroe	Gulf Bay Escambia Franklin Gulf Okaloosa Walton	Charlotte Collier Lee Manatee Pinellas Sarasota

BEACHES AS ECONOMIC ENGINES

- Travel and tourism are an American industry with a substantial and consistent foreign trade surplus. In 1999, that surplus was nearly $14 billion (International Trade Administration and Bureau of Economic Analysis).
- Beaches bring billions of dollars to federal, state and local governments in the form of tax revenues. Beaches benefit state and local government through increased sales taxes and property taxes (Douglass, 2002).
- Anything that harms beaches harms the economy. "The addition of sand can save the recreational and aesthetic aspects of the beach that control its economic value as well as provide storm protection" (Douglass, 2002).

According to Visit Florida, 19.4 million visitors came to Florida in April, May and June of 2002. (Executive Office of the Governor, 2002).

LEGISLATIVE INTENT

". . . prior to deposit of any moneys into the General Revenue Fund, $30 million shall be paid into the State Treasury to the credit of the Ecosystem Management and Restoration Trust Fund in fiscal year 2000-2001 and each fiscal year thereafter, to be used for the preservation and repair of the state's beaches as provided in ss. 161.091-161.212" [Florida Statutes 201.15(11)].

"The Legislature finds and declares that the beaches in this state and the coastal barrier dunes adjacent to such beaches, by their nature, are subject to frequent and severe fluctuations and represent one of the most valuable natural resources of Florida and that it is in the public interest to preserve and protect them . . ." [Florida Statutes 161.053]

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www.catanese.fau.edu

Anthony James Catanese Center
FOR URBAN & ENVIRONMENTAL SOLUTIONS AT FLORIDA ATLANTIC UNIVERSITY

CONCEPT PAPER

THE ECONOMIC AND FISCAL BENEFITS FROM FLORIDA'S BEACHES: A PROPOSED METHODOLOGY

PREPARED FOR

THE BUREAU OF BEACHES AND WETLAND RESOURCES

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OF ENVIRONMENTAL PROTECTION

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The Anthony James Catanese Center

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CONCEPT PAPER

The Economic and Fiscal Benefits from Florida's Beaches: A Proposed Methodology

Florida's beaches contribute to the local, state, and national economies by enhancing opportunities for labor and capital and by making net contributions to the tax base of local, state, and federal governments. The primary economic benefit to labor is increased income generated from expenditures associated with beach activities, namely, beach tourism, beachfront construction and development, and the resulting secondary economic impacts. Benefits to capital represent increased returns on beach-related investments vis-à-vis alternatives elsewhere in the economy. Fiscal benefits also accrue to governments as workers, together with other owners of capital, pay higher taxes on their incomes, spending, and assets.

Normally, economists identify economic benefits with spending by non-residents of the economy under study. To date, economic analysis of the value of restored beaches has been conducted largely on a case-by-case, project-by-project basis. Research has focused on the collection of visitor information and has included field surveys to obtain such data as willingness-to-pay, length of stay, and travel costs, in addition to actual number of users. Other studies have compiled data on increases in property values, revenues generated, storm protection benefits, and the value of mitigation efforts.

Figure 1, the Economic and Fiscal Impact of Beaches, is a model for predicting the economic value of restored beaches in the state. As discussed in the accompanying text, it traces the impact of beaches on the economy through the effects on tourism and increased property values. This same model, applied to individual projects, can show the economic impact of the state's beach management program. The model can be developed by setting up a clearinghouse for the compilation and analysis of data and other information already being gathered by different county and state agencies and supplementing these data in appropriate ways.

Figure 1. Economic and Fiscal Impacts of Beaches

Impacts	Benefits
I. Increased Tourism **Domestic and International**	Job Creation & Increased Incomes • Front Line Industries (hotels, restaurants, transportation, etc.) • Secondary Impacts (supplying industries, supplies to tourist workers, etc.)
II. Improved Storm Protection **Recreation and Habitat**	Increased Property Values • Private Residential Properties • Commercial Properties • Public Infrastructure
III. Increased Property Values	Job Creation & Increased Incomes • Front Line Industries (hotels, restaurants, transportation, etc.) • Secondary Impacts (supplying industries, supplies to tourist workers, etc.)
IV. Increased State Tax Base	Due to Increased Tourist Spending & Property Values • Sales and Use Taxes • Cigarette and Beverage Taxes • Gasoline Taxes
V. Increased Local Tax Base	Due to Increased Property Values • Schools • City and County Governments • Special Districts
VI. Increased Federal Tax Base	Due to Increased Jobs & Incomes • Federal Income Taxes
VII. Florida's Beach Management Program	Economic & Fiscal Impacts • Program as a Whole • Selected Projects

Local studies conducted by Stronge (see Table A in the Appendix) indicate that for many Florida beaches, non-residents (namely, out-of-state and international tourists) make the majority of visits. This suggests that the first step in determining the economic and fiscal benefits of beaches is to measure the amount of beach-related spending by out-of-state visitors.

A dataset that can be used for this purpose is collected by the state's tourism marketing agency, Discover Florida. A summary of the principal findings derived from this dataset is given in the *Florida Statistical Abstract*. The latest data show 62.3 million out-of-state visitors to Florida in 2001. There were an additional 8.0 million international visitors. Of the 62.3 million domestic visitors, a total of 22.4 million indicated that going to the beach was a primary activity during their stay in Florida. The report provides information on the characteristics of domestic tourists, including party size, length of stay, and average expenditures by type. However, such information is not broken out for the tourists who report going to the beach as a primary activity.

To determine the impact of the state's beaches, an analysis of domestic beach tourism is essential. This could be undertaken by the Catanese Center using the data obtained from Visit Florida. If these data cannot be obtained, it will be necessary for a duplicate survey to be undertaken. In prior years when the survey was conducted by the Florida Department of Commerce, it was possible to add some additional questions; this option is worthy of consideration. Additionally, further information on the geographic breakdown of beach visitors should be obtained.

A standard economic impact model will chart the effects of tourist spending on the economies of the local area, the state, and the nation. Tourists spend on goods and services, both while traveling to the beach community and during their visit. Their spending creates jobs in the "front line" industries, namely, transportation, hotels, restaurants, and general retail stores and service establishments. These jobs are created locally, and elsewhere in the state and the nation. As the front line industries expand, they will purchase inputs from their suppliers creating jobs in second line industries. Finally, as the workers in front line and second line industries experience increased incomes, there will be further expansion in the local, state, and national economies. All of these

effects will be captured by a standard economic model, such as those available from the U.S. Department of Commerce (the REIS Model) or private suppliers (IMPLAN).

Beaches provide direct benefits at the shoreline, in terms of improved storm protection, recreation, and habitats. These benefits from beaches will lead to improved values for nearby residential and commercial properties. The more vulnerable a property to the risk of storm losses, the lower will be its value. Because beaches reduce vulnerability, they add to property values. Private properties will also benefit from the reduced vulnerability of public infrastructure to storm damage, since poor infrastructure depresses property values. The benefits from the protection of public infrastructure, of course, extend beyond the immediate beach area.

Beaches also convey recreational benefits to properties, since they enable occupants of the properties to enjoy recreational experiences that would not otherwise be as readily available. The capitalized value of the recreational benefits will be included in the value of residential properties. A commercial property will also benefit from the beach because of the increased net income from paying guests or visitors attracted by the proximity of the beach.

Finally, there are other benefits that impact property values in the beach area. These include the provision of habitat for birds, turtles, and other wildlife that use the beach and add to the enjoyment of people's experiences at the beach. This added enjoyment will show up in increased demand for beachfront property values and consequent increases in property values.

More valuable properties tend to be occupied or visited by more affluent occupants or visitors. More affluent people spend more on their activities than do people with less affluence. As a result, there is a positive impact on jobs in the local and state economy from higher valued properties. A real estate study, comparing beachfront and non-beach property values, will determine the contribution of beaches to property values. The total impact of higher property values can further be traced by the standard economic impact model above.

Beach tourists contribute to the tax base of the State of Florida. Much of their front line spending is subject to sales and use taxes, including lodging, dining and much paid

recreation and shopping. The extra spending induced by the higher spending from higher-valued properties will also add to the state's tax base.

Beach-induced increases in property values increase the tax base of local governments that levy taxes in the local communities. The primary local government units that benefit from increased beachfront property values are Florida's public school districts. Other benefiting governments include counties and cities, as well as a variety of special taxing districts, including health and hospital, water management, inland navigation, mosquito control, and so on. The extent of these impacts on local government revenues can be obtained from the real estate study discussed above. A sample of studies at the local level is presented in TABLE B in the Appendix. It will not be possible to analyze the coastal property of the entire state. Building on previous studies, some selected geographic areas should be added to provide a better regional picture. This should include at least a portion of Dade and Pinellas counties and an area in the state's northeast.

The Federal Government also enjoys increased tax revenues as a result of Florida's beaches. As increased spending by tourists and residents generates increased jobs and incomes, federal income taxes rise. Applying average tax rates to these increases in incomes will enable the impact on federal revenues to be obtained. The primary improvement to federal revenues will be due to the expenditures of international tourists and international beachfront property owners.

The statewide model outlined here would assist in the development of an informed management strategy that, among other things, could encourage regional approaches to shaping the future of Florida's beaches. To prepare such a model, a methodology would need to be developed using the framework outlined above. For example, the state's public parks and beaches, which regularly keep track of visitors, must first be identified. A clearinghouse could then be established and monthly reporting procedures implemented. Counties could input beach and park attendance statistics to the database electronically via e-mail. Economic data (property valuation, tax revenues) could then be added with subsequent analysis of variables. Depending on need, data could be collected one-time only or on an ongoing basis (e.g., with monthly reporting). In addition, information on Storm Damage Reduction (i.e., storm protection benefits/hazard mitigation) should also

be collected and incorporated into the model. Benefits accruing to commercial and residential properties, undeveloped lands and uplands, and infrastructure should be included in the evaluation. (See, e.g., Douglas and Walther, 1993; Fore and Wutkowski, 1993; Mann, 1996; Stronge, 1995c; Stronge, 1999.)

Table C lists a number of major studies conducted on the economic valuation of restored beaches. Extant research focuses primarily on national and regional economic development variables. For each study, the category of research variable and data analysis is indicated. Data gaps and/or problems in obtaining the required data are shown in the last column, as reported by individual authors. It should be noted that all studies have research gaps, since none includes all the research variables of economic valuation. Most focus instead on a single variable. An effective model incorporating many of the listed variables described above would be the most cost effective approach in the development of an informed strategy for coastal zone management by beginning at the state level.

Today, both state and federal agencies, in particular the Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (Corps), are realizing that a broader approach to analyzing the economic impact of beaches research is needed. They recommend a comprehensive economic analysis to include national economic development, environmental quality, regional economic development, and other social effects. A statewide model could begin this research program, testing the efficacy and availability of statewide variables first and then proceeding to others.

In conclusion, a statewide model incorporating data on these categories of research variables at the local, regional, and state levels would provide the most comprehensive economic valuation possible with respect to the benefit of restored beaches to the State of Florida. Such a model would have the potential for nationwide application. It should also be noted that interagency and intergovernmental cooperation would be essential to data gathering for a clearinghouse on the research variables under analysis. An effective model, which takes anticipated benefits into consideration, would be the best approach to the development of an informed strategy for coastal zone management at the systems level. This economic valuation methodology would enable such agencies as FDEP and the Corps to adhere to their legislative mandates and priorities.

TABLE A Visits By Non-Residents to Florida's Beaches Percent of Total Visits			
Beach	Study Year	Out of County Visitors	Out of State & International
Navarre Beach (Summer)[1]	2001	85.0	77.1
Anna Maria Island[2]	1995-96	63.2	52.9
Captiva Island[3]	1989-90	77.3	59.3
Sanibel Island[4]	2000-01	81.8	72.7
Marco Island[5]	1989	72.4	53.7
Broward County[6]	1995-96	51.8	43.2
Delray Beach[7]	1995-96	48.0	41.8
Palm Beach Island[8]	1997-98	33.6	27.0
Indian River County[9]	1992	61.5	36.9

Note: The reports cited below can be obtained from Stronge through the Catanese Center.

[1] William B. Stronge, *Use of the Navarre Beach Beaches, 2001*. Prepared for Santa Rosa County, 2001, TABLE 4, page 3.
[2] William B. Stronge and Ronald R. Schultz, *The Anna Maria Island Beach Restoration: An Economic Study, 1995-96*. Prepared for Manatee County, 1997, TABLE 4.2, page 62.
[3] William B. Stronge and Ronald R. Schultz writing as Regional Research Associates, *Use of Captiva Beaches and Economic Impact, 1989-90*. Prepared for Captiva Erosion Prevention District, 1990, TABLE 1.2, page 15. This study has been replicated many times with similar results. This reference is the most convenient citation.
[4] William B. Stronge, *Use of the Blue Dolphin-Gulf Pines/Shores Beaches on Sanibel Island, 2000-01*. Prepared for the City of Sanibel, 2001, TABLE 5, page 4.
[5] William B. Stronge, *A Benefit Analysis of the Marco Island Beach Restoration Program 1989.* Prepared for Collier County, 1989, TABLE 12, page 22.
[6] William B. Stronge and Ronald R. Schultz, *Broward County Beaches: An Economic Study 1995-96*. Prepared for Broward County, 1997, TABLE 4.2, page 46.
[7] William B. Stronge and Ronald R. Schultz, *The Beach Maintenance Program of Delray Beach: An Economic Study, 1995-96*. Prepared for the City of Delray Beach, 1997, TABLE 4.2, page 54.
[8] William B. Stronge, *Palm Beach Island Recreational Beach Use 1997-98*. Prepared for the Town of Palm Beach, 1998, TABLE 4, page 8.
[9] William B. Stronge and Ronald R. Schultz writing as Regional Research Associates, *Winter Tourism in Indian River County, 1992*, and *Summer Tourism in Indian River County, 1992*. Prepared for Indian River County, 1992, TABLE 1.3, page 44 (Summer Study) and page 40 (Winter Study).

TABLE B Annual Contribution of Beaches to Local Taxes Millions of Dollars			
Taxing Unit	Anna Maria Island[10]	Broward County[11]	Delray Beach[12]
Beach Communities	$0.1	$5.7	$1.1
County Government	$0.7	$8.0	$0.8
School District	$0.8	$9.9	$1.8
Other County-wide	$0.1	$2.9	$0.5
Other Taxes	$0.2	$1.7	NA
Total	$1.9	$28.2	$4.2

Sources: See footnotes below.

[10] See Anna Maria report cited in footnote 2. TABLE 1.16, page 37.
[11] See the Broward County report cited in footnote 6. TABLE 1.10, page 29.
[12] See the Delray report cited in footnote 7. TABLE 1.13, page 35.

TABLE C
Typology of Data

	Tourism	Property Values	Storm Protection	Mitigation	Data Gaps/Problems*
Bell, 1992	•			•	Gaps: Relation between beach supply and projected regional demand; surveys at species level for angler thresholds
Bell and Leeworthy, 1986	•				
Curtis and Shows, 1982	•				Problems: Local area multipliers, among other variables, difficult to estimate
Curtis and Shows, 1984	•		•		Problems: Local area multipliers, among other variables, difficult to estimate
FCMP/DCA, 2000	•		•		
Houston, 1996a	•				
Houston, 2001	•				
King, 1999		•			
King, 2001	•				
Lent, 1998	•	•			Gaps: Empirical measures of correlation of recreation value to beach width; also problems with estimating visitors, etc.
NOAA, 2002	•				
Rogers, 2000			•		
Rosati et al., 2001			•	•	
Schmidt, 1993			•		
Stronge, 1994b	•				
Stronge, 2000		•			
Stronge and Schultz, 1997b		•			
Stronge and Schultz, 1997d		•			
Travel Industry Association of America, 2002	•				

***** Note: All studies have research gaps since none includes all research variables of economic valuation; most focus instead on a single variable. Additional gaps are noted in the table as identified by individual author.

A LITERATURE REVIEW

ON THE ECONOMICS OF BEACHES

PREPARED FOR

THE BUREAU OF BEACHES AND WETLAND RESOURCES

OF THE FLORIDA DEPARTMENT

OF ENVIRONMENTAL PROTECTION

June 4, 2003

Submitted by

The Anthony James Catanese Center

for Urban & Environmental Solutions

at Florida Atlantic University

TABLE OF CONTENTS

INTRODUCTION

Beaches constitute the number one tourist destination in the country, and coastal states receive the greatest share of all tourist revenues in the United States. The combined annual visits to all of America's federal and state parks, recreational areas, and public lands amount to less than those to beaches. In addition, travel and tourism are the largest industry, employer, and earner of foreign revenue in the U.S.

This literature review presents summaries of articles, studies, reports, conference presentations, and other related research on the value of beaches, with emphasis on contributions to the Florida economy. Economic benefits are also realized at the local, regional, and national levels. Tourism is the major industry in the state, and surveys indicate that visitors, whether resident or non-resident, prefer Florida's beaches to other venues for leisure-time activities. Research also shows that people will seek alternative places to recreate and spend leisure time if they discover that formerly favorite beach spots have become severely eroded or otherwise polluted and left in a state of neglect and disrepair. Soon, visitor dollars will be spent elsewhere; this will be accompanied by a concomitant loss of economic benefits in the original area and its surroundings.

The literature reveals that there are three main economic benefits attributed to the maintenance of healthy beach systems in the state. These include: enhanced property values; increased sales, income, and employment opportunities resulting from resident and non-resident spending; and expansion of the federal, state, and local tax base. Moreover, beaches protect the developed shorefront from storm surges, provide a recreational facility for people, and serve a natural resource function by providing habitat for many species of plants and animals.

Finally, it should be noted that the summaries below are arranged in topical categories including tourism and economic development, economic case studies of beach nourishment, beach management in Florida and other states, microeconomic case studies, managing coastal erosion, financing nourishment, monitoring, methodology, and engineering. This grouping represents classifications based on research methodology and conceptual categories designed to identify research areas and assist the reader in better understanding the materials presented.

LITERATURE REVIEW

TOURISM AND ECONOMIC DEVELOPMENT

Bell, 1992. Actual and Potential Tourist Reaction to Adverse Changes in Recreational Coastal Beaches and Fisheries in Florida.

The purpose of this research was to determine the role of resource scarcity, if any, in influencing tourist visits to Florida. Scarcity in this context means a generalized decline in quality and quantity of a natural resource used for recreational purposes. The project tests the hypothesis that "selected natural resources supply constraints (e.g., saltwater fisheries and beaches) in Florida's coastal zone, will moderate the projected growth in tourism." Research methods included a time series on tourist air and auto arrivals with and without natural resource constraints. In addition, a field survey of tourists was conducted to quantify tourist participation in saltwater beach use and saltwater recreational fisheries, including their response, if any, to resource scarcity.

The study reveals that in 1990 there were 224 miles of critical saltwater beach erosion in Florida, or 28.5 percent of the coastal shoreline. Also in that year, as the tourist survey shows, 57.4 percent of the air and auto visitors to Florida participated in saltwater beach activities. In conclusion, the resource scarcity hypothesis for beaches is rejected as it relates to tourism. However, the author notes that with 28 percent of the shoreline in critical erosion, future demand may necessitate renourishment efforts as the only means of mitigating resource scarcity.

Florida Coastal Management Program, Florida Department of Community Affairs, 2000. FACT 2000 -- Florida Assessment of Coastal Trends.

The FACT 2000 report presents a wide variety of data on "indicators," measured or observed parameters that provide information about a system. With respect to Florida's coastal resources, indicators can provide details on relationships between different parts of the coastal resource system, human activities that affect or are affected by the environment, and patterns in the physical state of the environment. Indicators are also

useful in revealing information regarding non-point sources of pollution, habitat suitability, and whether regulations are having desired outcomes.

The report discusses the issue of coastal access and notes: "With increasing development of the coast, private development along the shore forms a legal and physical barrier, blocking access to the public trust zone of the coast. With increasing population and tourist visitation, the demand for coastal access is increasing at the same time available beachfront access itself is decreasing."

One of the indicators (described in the Coastal Access section) measures the number of miles of Florida's sandy beaches that are either "critical" or "non-critical" eroding areas. Data reveals that the total number of miles of eroding beach increased by 104 miles since 1989, from 332 miles that year to 436 miles in 2002. Moreover, in 1989, 218 miles were "critical" eroding; surveys in 1999-2000 revealed that 328 miles were in this category, showing an increase of 110 miles.

Another interesting indicator, discussed in the Community Stewardship section of the report, measures people's awareness of coastal issues. The Florida Coastal Issues Survey revealed that 55.9 percent of respondents live less than a half hour drive from the coast and 40 percent reported that they visit the coast a few times a month or more. The report then notes that Florida is a peninsular state in which "coastal resources and uses impact many individuals and businesses every day, meaning that coastal issues are frequently debated in Florida's media and political arenas."

Houston, 1996a. The Economic Value of Beaches.

Travel and tourism is the largest industry, employer, and earner of foreign revenue in the United States. Foreign tourists spend $80 billion here, producing a national trade surplus of $26 billion. Beaches constitute the number one tourist destination in the country, and coastal states receive the greatest share (85 percent) of all tourist revenues in the U.S. However, America's foreign competitors for tourists spend far more on restoring and maintaining their beaches. For example, Germany, with less than five percent of the shoreline of the U.S., spent five times more (or $3.3 billion) than the U.S. on shoreline protection over the same 40-year period.

Miami Beach is used as an example of return on beach restoration expenditures. For every dollar spent annually on beach restoration, $700 is returned in foreign revenue. Tourist visitors to Miami Beach exceed those to Yellowstone, the Grand Canyon, and Yosemite combined. In the mid-1970s, Miami Beach was a neglected city with virtually no beach. Following beach nourishment in the late 1970s, rejuvenated Miami Beach attracted 21 million visitors in 1983 compared with roughly eight million in 1978.

Houston, 2001. The Economic Value of Beaches – A 2002 Update.

Investment in beach nourishment by the federal government and its cost-sharing partners from 1950-1993 averaged $34 million annually (in 1993 dollars) (U.S. Army Corps of Engineers, cited by Houston, 2001). Since the 1960s, federal investment has increased to approximately $100 million per year (Marlowe, cited by Houston, 2001). On the other hand, travel and tourism produce $223.9 billion in tax revenues, of which 53 percent (or about $119 billion) accrue to the federal government (World Travel and Tourism Council and U.S. Travel and Tourism Administration, cited by Houston, 2001). The tourist industry is largely fragmented: 98 percent of the 1.4 million tourism-related enterprises in the United States are small businesses (U.S. Travel and Tourism Administration, cited by Houston, 2001).

Houston, 2002. The Economic Value of Beaches – A 2002 Update.

The combined annual tourist visits to all of America's federal and state parks, recreational areas, and public lands amount to less than those to beaches. Although the federal government receives the major share of tax revenue from beach tourist spending, such proceeds far exceed federal expenditures on beach infrastructure. As in the preceding article, the author uses the example of Miami Beach, which was revitalized by beach renourishment. The federal government spends less nationally on beach nourishment than foreign tourists to Miami Beach pay in federal taxes each year. Foreign competitors for international tourists spend more on protecting and restoring beaches, and on advertising and marketing. The author remarks that the United States' lead in international tourism declined in the 1990s and is projected to continue to fall significantly over the next decade.

NOAA Magazine Online, Story 61 (Nov. 15, 2002). What is the "Value" of the Beach?

This articles begins: "Most people recognize that the ocean and coast contribute to the U.S. economy – whether it be through fishing, tourism, shipping, development or any number of commercial activities." Then the question is posed: "But what is the value of spending a day at the beach, having wildlife and clean water at that beach or ensuring that the beach is there for your children or grandchildren to enjoy?" While much of this data is not readily available, there are a number of ongoing studies to assist in gathering, quantifying, and analyzing this information.

Environmental valuation is described as an "important new tool for coastal managers" because both marketable (tangible) goods and services as well as non-market resources are included in the cost-benefit equation of environmental economic analyses. The article also discusses NOAA's valuation efforts, in addition to its education and outreach activities and its Coastal and Ocean Resource Economic Program.

Stronge, 1994b. Beaches, Tourism and Economic Development.

The State of Florida is pursuing an economic development strategy of expanding employment in high-technology industries by, for example, providing incentives for corporate relocation. The author contends that the state is ignoring its traditional sources of growth, such as tourism, in pursuit of these high-tech jobs, which are on the decline. In tourism, a competitive advantage has been demonstrated in many coastal states. Hence, creation of high-wage jobs in this industry should be a priority for expenditure of the state's economic development dollars. Beach management is essential to economic development in Florida and in other states that depend on beaches for tourism revenues. In 1992, about 40 million tourists visited Florida, spending nearly $14 billion and creating about 630,000 jobs with a payroll of $8.9 billion. [Tourists are defined as visitors who stay less than three months.]

Travel Industry Association of America, 2002. Domestic Travel Market Report.

With respect to U.S. resident households taking domestic trips, this report presented data on a category encompassing "Travel by Activity," in addition to a number of other

types of analyses. Among the profiles in this group, a Beach person-trip profile was generated, together with data on an Outdoor Activities/National or State Parks person-trip profile.

Wiegel, 1994. Beaches – Tourism – Jobs.

In this editorial, the author advocates for greater recognition of the importance of recreation to the economy. Recreation creates jobs and a positive flow of tourist dollars, while benefiting the nation's social fabric.

ECONOMIC CASE STUDIES OF BEACH NOURISHMENT

Curtis and Shows, 1982. Economic and Social Benefits of Artificial Beach Nourishment: Civil Works at Delray Beach.

This paper describes the various civil works projects (e.g., revetments, groins, seawalls, and bulkheads) used to control beach erosion (i.e., "coastal defense strategies") and the successes, failures, and consequences of each method in different Florida beach areas. The primary focus is on the economic consequences of beach renourishment in Delray Beach. The then-current economic climate of Delray Beach and Palm Beach County in particular, is described, with emphasis on the impact of tourism on Florida in general. The authors also discuss at length the benefits of beach nourishment with respect to recreation, tourism, and storm protection. Costs of renourishment projects to remedy erosion at Delray Beach are then examined, including initial capital outlay and periodic maintenance. A detailed cost-benefit analysis is then performed and the conclusion is drawn that the renourishment project was economically viable.

Curtis and Shows, 1984. A Comparative Study of Social and Economic Benefits of Artificial Beach Nourishment: Civil Works in Northeast Florida.

This study chronicles the steady rise in demand (as the state's population soared in the 1970s and 1980s) for beach-related activities in Florida. With 1,350 miles of shoreline and roughly 275 miles of saltwater beaches, the report notes that much of the state's beachfront is in private hands and thus not accessible for tourist and general

resident use. Erosion and the loss of beachfront along developed shorelines are discussed, with beach nourishment proposed as a viable solution. In particular, the economic viability of beach nourishment at Jacksonville Beach (Duval County, Florida) is examined and compared to earlier studies on Delray Beach (including Curtis and Shows 1982 study, above). Data sources include U.S. Army Corps of Engineers studies, including "Duval County, Florida, Beach Erosion Control General Design Memorandum and Appendum, Appendix B, Economics, 1983," in addition to other available information on beach visitors. Storm protection is one benefit of beach nourishment discussed in this study, in addition to the manner in which beach nourishment substitutes for seawall construction and maintenance.

King, 2001. Economic Analysis of Beach Spending and the Recreational Benefits of Beaches in the City of San Clemente.

This report analyzed the results of a city-sponsored survey of visitors to San Clemente's beaches and included economic data, such as revenues generated from beach-related spending, the estimated value of one beach day, and indirect and induced effects. The study concluded that, because a substantial portion of the economic and tax benefit from beach tourism and recreation does not flow to the city, state and federal aid should help support beach nourishment projects.

Lent (with Jack Fawcett Associates), 1998. The Economic Effects of a Five Year Nourishment Program for the Ocean Beaches of Delaware.

Since 1988, the Delaware Department of Natural Resources and Environmental Control has been managing the state's ocean shoreline through nourishment efforts. Costs are shared by federal and local governments; the state contributes approximately $2 million annually. Delaware's thriving coastal communities demonstrate the value of nourishment, and this research endeavors to examine and measure the economic benefits of nourishment, while identifying the economic beneficiaries. Economic benefits and economic activity for two scenarios are estimated: the "baseline" scenario continues the statewide nourishment that maintains the existing shoreline, and the "without nourishment" scenario allows the shoreline to diminish according to the expected annual

erosion rate during the subsequent five-year timeframe. The report presents detailed information on both scenarios

The state must consider ways to finance continued beach nourishment, in which cost allocation reflects the incidence and magnitude of state, regional, and local economic benefits, along with economic gains resulting from stimulated economic activity in Delaware vis-à-vis other states. The geographic distribution of those affected by nourishment, including property owners, business owners and employees, and visitors should be considered in the cost allocation process.

Stronge, 1995c. The Economics of Government Funding for Beach Nourishment Projects: The Florida Case.

Beaches are not only economic resources, but also natural resources subject to erosion and requiring costly maintenance. The author examined the economic argument for government funding for beach nourishment projects in Florida. Coastal properties are subject to government regulation due to the impact of actions on adjacent or downdrift properties. Such actions can alter the natural flow of water, the deposition of sand along the coast, and wave climate. The author contends that 80 percent of coastal erosion on Florida's east coast results from inlets, many of which are man-made or modified for environmental or navigational purposes. Inlets are kept open due to the public interest in navigation or maintaining water quality landward of barrier islands. Erosion is a problem in the Intracoastal Waterway, particularly for property owners downdrift of inlets. To protect their investments, property owners often build structures such as seawalls and revetments. However, beach nourishment is prohibitively expensive for individual owners due to costs of offshore dredging, shipping, and the short renourishment intervals associated with small projects. Moreover, construction of seawall or rock revetment may have adverse impacts on the beach and neighboring properties. Consequently, the state tends to be reluctant to permit such actions. Nevertheless, beach nourishment can be cost effective for a segment of beach with many property owners (such as Captiva Island). A successful campaign to launch a beach nourishment project requires that residents of a community be well-organized with clearly articulated interests and benefits.

Sea walls and revetment structures installed by private owners may threaten adjacent public beach areas. In such a case, it may be in the public interest to deposit sand in front of public and private property. It should be noted that government funding of beach nourishment to protect public properties may also have adverse affects on private downdrift property.

Public access and parking must be available every half-mile for state-funded beach nourishment projects in Florida. Additionally, an Erosion Control Line must be set and all beach seaward of the line is held in public ownership.

There is a reluctance in Florida to commit public funds to beach nourishment of private property. Fueling the controversy is the commonly held public perception that threatened buildings were built too close to the shoreline (fact: buildings were built relatively far from the water, but erosion caused by nearby inlets resulted in an encroaching water line). There may be another perception that coastal property owners are affluent; thus, public funding of coastal protection is seen as a subsidy for the wealthy. Also, many owners are not state residents and their year-round neighbors may resent their presence altogether. Another factor is that the environmental/preservationist community may believe that actions to protect coastal properties disturb the natural environment and should not be supported.

On the other hand, proponents of publicly funded beach nourishment stress the positive economic impacts of beaches, such as attraction of non-resident visitors, employment opportunities, increased local payrolls and tax receipts, and a reduced tax burden on residents. This argument is strongest at the local government level. At the state level, the argument weakens because visitors who avoid one eroded beach may visit a competing attraction such as another beach.

If the natural resource of sand were depleted, a community would experience adverse economic impacts unless an alternative economic base is established. People may move to other communities, beach infrastructure may be abandoned or poorly maintained, and existing infrastructure may have to be supported from a smaller tax base.

Federal funding of beach nourishment has been justified by public ownership of threatened shoreline and by declaration of national disaster areas due to major storm

events. Justification of protecting public beach parks requires high storm protection benefits, which generally inure to private properties.

Arguments for Federal Funding:

- There is a national interest in keeping inlets that cause erosion open.
- Roads and other infrastructure need to be protected to be available to the nation in case of war.
- The National Flood Insurance Program exposes the national taxpayer to the same degree of risk; thus, protection is in the national interest.
- It is probable that areas severely damaged by a major storm event would qualify for National Disaster Assistance programs.

Arguments for State Funding:

- There were seven million foreign tourists who visited Florida's beaches (in 1993); they spent $2 billion here.
- There are economic ripple effects from international beach visitors ($3.8 billion for the state and 141,740 jobs).
- Florida's beaches attract tourists from around the country.
- The state's interest in maintaining inlets that cause erosion is not significant at the national level.
- State ownership of threatened coastal property is an important factor.
- State beach parks provide recreational benefits to state residents who do not reside in coastal communities.
- Cost sharing with federal funds returns some revenues to the state.

Arguments for Local Funding:

- Local property owners benefit.
- Local recreational beach users may benefit.
- Local economic and fiscal impacts are likely to be the greatest.

Stronge, 2000. (14th Annual National Conference on Beach Preservation Technology).

Four studies of real estate in Florida were reviewed, including Anna Maria Island, Broward County, Captiva Island, and Delray Beach. The author determined that beaches

contribute about 25 percent of the value of Florida's coastal properties (estimated at $27.5 billion). High property values create nearly 400,000 jobs with about $8.1 billion in payrolls due to increased spending of more than $15 billion in the state. The real estate studies were based on matched samples of beachfront and non-beachfront properties. Comparisons were carried out as follows: 1) properties of the same type in the same geographical location were compared before and after beach restoration; 2) properties on barrier islands were compared with properties immediately landward of the barrier islands.

Stronge, 2002(b). Recreational Beach Use on Captiva Island and Economic Impact: Winter Season 2002.

A survey of beach users on the gulf-front beach of Captiva Island was conducted in the winter of 2002. The survey updated previous economic impact surveys from 1987, 1990, 1991, and 1994. The survey also updated the recreational benefits for Captiva of the 1989 and 1992 beach nourishment projects, as well as the project planned for 2003. During a six-day period in March 2002, 489 personal interviews were conducted and counts were made of the number of people on the beaches. Results were extrapolated to include the winter season of November through April.

The total number of visitors during this season was estimated at 291,789; the total number of beach visits has remained relatively stable since 1991. Most visits to Captiva beach are by non-residents of the island (98.4 percent), people from out-of-state made more than 75 percent of the visits, and nearly 4 percent of visits were made by foreigners. On average, beach visitors expressed a willingness-to-pay (WTP) of $12.89 per visit -- more than double that reported in 1994 -- and among the highest of values expressed at other beaches in Florida.

The non-resident visitors of Captiva beaches in the winter of 2002 spent $54.2 million, a 40 percent increase over the 1994 figures. Roughly half of the spending was for lodging and 25 percent was spent on food/dining. Rental cars and gasoline comprised the remainder of the expenditures. Captiva's beach visitors spent money in other parts of the county also, leading to employment income there, as well. Captiva beach visitors from outside Lee County spent $53.3 million elsewhere in the county this past winter. Out-of-

state visitors are also attracted to and spend money on Captiva, elsewhere in the county, and elsewhere in the state. Out-of-state visitors to Captiva Island spent $106.8 million during their stay in Florida. The largest expenditures occurring outside Lee County occurred in the vicinity of Disney World, Miami, and the Florida Keys.

Stronge and Schultz, 1997b. The Beach Maintenance Program of Delray Beach: An Economic Study, 1995-96.

This report estimated economic impacts of the beach maintenance program in Delray Beach with respect to the economies of Palm Beach County and the State of Florida. In the 1970s, severe beach erosion in Delray Beach led to the collapse of a portion of State Road AIA into the Atlantic Ocean. In response, a successful beach maintenance program was completed in 1973, with maintenance renourishment conducted in 1978, 1984, and 1992. The protection of State Road A1A, public parks, and privately owned structures in Delray Beach resulting from beach restoration is evident.

Beach restoration in Delray was estimated to increase: 1) local property value by $125.1 million; 2) city economic production by $46.3 million; 3) county economic production by $96.6 million; 4) Southeast Florida regional economic production by $56.2 million; and 5) local government revenues by $4.4 million annually.

Stronge and Schultz, 1997d. The Economic Benefits of a Major Urban Beach: A Case Study of Broward County, Florida.

Except for several maintained inlets to the Intracoastal Waterway, Broward County's beaches extend uninterrupted for 25 miles. The principal coastal cities are Deerfield Beach, Pompano Beach, Fort Lauderdale, and Hollywood. The barrier islands consist of mid- to high-rise condominiums and hotels, smaller one- and two-story motels, single-family residences, and commercial businesses. Real estate in Broward is valued at more than $60 billion. Due to its subtropical location, Broward County's beaches are used heavily year-round. The large urban population, the built-up nature of the barrier islands, and the subtropical setting combine to make Broward's beaches exceptionally valuable.

Beaches contribute to the local economy in three ways: 1) they increase property values; 2) they create sales, income, and jobs due to resident and non-resident spending;

3) they increase the local and state tax base. The authors estimate that Broward's beaches contribute $1.351 billion in local property values, $547.9 million in local economic production, and $29.2 million in local government revenues. The authors describe benefits and "disbenefits" of beaches. Benefits enhance the value of property, while disbenefits reduce property values. Disbenefits include increased traffic congestion, and an increase in people who litter or commit crimes. Beach properties amount to 2.25 percent (or $1.35 billion) of the property values in Broward County. The barrier islands comprise $1 billion and the mainland $302.4 million in beach property values.

If Broward's beaches were to erode away, the loss in resident expenditures would be $136.9 million. Beaches attract $285 million in non-resident expenditures in Broward County annually. There are also ripple effects due to beach-related purchases made elsewhere in the county. Estimates of indirect spending were $547.9 million annually with spending accounting for 17,710 jobs countywide. Property tax collections increased by $28.2 million in Broward due to the beaches.

BEACH MANAGEMENT STUDIES -- FLORIDA

Bell and Leeworthy, 1986. An Economic Analysis of the Importance of Saltwater Beaches in Florida.

Natural resources fuel the Florida economy and beaches make Florida a mecca for worldwide seekers of outdoor recreation. Some perceive that Florida's beaches are in decline due to the natural processes (storms, littoral drift) and man-made structures (inlets) that accelerate the erosion process. Because beaches are common property without user fees, private individuals do not have incentives to invest in beach preservation or restoration. Therefore, to preserve and restore beaches in the state, government intervention is essential. For government intervention to occur, economic benefits must be estimated using a benefit-cost analysis.

Economic impact and economic valuation are different. *Economic impact* assesses the number of people who participate in beach activities and the amount they spend while participating in such activities. These expenditures result in the creation of jobs and income. People in such jobs are directly or indirectly dependent on beaches for their

livelihoods. Sales, employment, wages, and taxes generated by recreational beach users are the elements of economic impact. This type of analysis is useful for assessing the regional economy in Florida, due to the value of beaches as a resource that generates jobs and income. On the other hand, *economic valuation* is an attempt to "measure benefits received by beach users or the value people place on a day at the beach" (p. 1). The authors contend that economic-valuation estimates represent the proper measure of comparison to the cost of beach projects because they capture beach-user benefits.

At the time of this report, 65 percent of Florida residents and 33.87 percent of Florida tourists over the age of 17 used beaches at some point during the year. Both groups generate beach related direct sales, which generate state taxes. In contrast to resident dollars, tourist dollars have a ripple effect on the Florida economy and produce "induced sales, employment, wages and taxes" (p. vii). Because beaches are publicly owned resources, they do not generate an overt market price; as a result, indirect methods are used to place a value on a recreational beach day. Willingness-to-pay by beach users varies due to issues such as income, number of beach days, tastes, beach characteristics, and availability of substitutes.

Policy Issues:

- The regional economic impact of a beach on a county can be estimated by using a cross-section equation that predicts per-day expenditures for tourists and residents. For more detail, data can be used from an existing sample together with extraneous data from various state agencies.
- The value of a beach day for an individual can be estimated using a sub-sample or a cross-section regression analysis.
- Findings on beach valuation may be used in beach nourishment projects with relatively little research cost to compute benefits.
- Existing beach access was not found to be linked to willingness-to-pay or demand for beach days.

BEACH MANAGEMENT STUDIES -- OTHER STATES

King, 1999. (LA). The Fiscal Impacts of Beaches in California.

This economic study on the impact of California's beaches finds that the state's beaches generate $14 billion of direct revenue and a total of $73 billion if indirect and induced benefits are included. A total of $14 billion in federal tax revenues is generated by beach activity in the state, including $2.6 billion in direct federal tax revenues. Further, the state's beaches generate 883,000 jobs across the country.

A case study of Huntington Beach indicates that federal and state governments not the local community take the major share of tax dollars from beach activity. Eighty-two percent inures to the federal government tax coffers, while 15 percent goes to the state, and a mere 3 percent is realized at the local level. The city's beach revenues were $135 million in federal taxes, $25 million in state sales taxes, and only $3.8 million in local sales taxes and parking fees.

King compares California's ranking in federal appropriations with other states and finds that the state is not comparably funded. California receives one tenth as much as New York and New Jersey with smaller coastlines and fewer beaches. Even though California generates 10 times more federal tax dollars (per dollar of shoreline appropriation) than Delaware, it receives only twice as much in federal shoreline protection appropriations. Its beaches generate 20 times more economic activity for the national economy than Delaware's beaches and receive measurably less federal monies.

Landry and Keeler, 1999. Financing Better Beaches – The Recreational Benefits of Beach Improvements.

The researchers examined the four barrier islands in Georgia that are significantly developed: Tybee, Jekyll, St. Simon's, and Sea. These islands, similar to all developed shorelines, are vulnerable to coastal erosion and storm damage. Erosion protection structures have armored 55 percent of the beaches on the four islands; Tybee and Sea

Island have had periodic beach nourishment. A survey was conducted to estimate the recreational benefits of beach management policies and financing implications.

The survey analyzed respondents' willingness-to-pay. The average non-season pass holder was estimated to be willing to pay nearly $338 extra (through higher annual parking fees) for better beach conditions. The season pass holders were willing to pay less (approximately $196). A baseline mean WTP for wider beaches was found to average approximately $278. Spring and summer visitors had a higher WTP than winter visitors. Seniors citizens and local residents both had a lower WTP for higher parking fees to cover beach improvements. It was inferred that people are much more willing to contribute to resource management when they know how the money will be spent.

Regarding paying to improve beach conditions, the researchers noted that passing on the cost by increasing parking fees has advantages -- people are accustomed to paying them, they are difficult to avoid, and they are user-specific – while avoiding the stigma of raising general taxes. On the other hand, when looking at beach management policy and equity it should be understood that beach degradation is associated with channel maintenance and coastal development. Toward this end, cost-sharing with local property owners and harbor managing entities should be considered.

MICROECONOMIC CASE STUDIES -- FLORIDA

English, Kriesel and Wiley, 1996. Economic Contribution of Recreating Visitors to the Florida Keys/Key West.

The authors report on research conducted as part of a project to examine economic issues related to recreational use of the Florida Keys. An economic impact analysis was prepared to "estimate the economic contribution (sales, employment and income) of both resident and visitor recreational uses of the Florida Keys and Florida Bay to the Monroe County economy and the South Florida regional economy" (p. 1).

Higgins, 1999. The Broward County Beach Management Program.

The State of Florida estimates that 21 of Broward County's 24 miles of beaches are severely eroded. The county has engaged in beach nourishment efforts since the early

1960s. Such projects have been funded by federal, state, and local governments and have performed as expected, and in most cases have actually exceeded the expected design life of 10 to 12 years. The current Broward County Beach Management Program consists of three phases. The first is a project to place beach fill on all the county's eroding beaches. The second is a proposal to construct erosion control structures in the John U. Lloyd Beach State Recreation Area just downdrift of Port Everglades. The third is a proposal, if feasible, to implement sand bypassing the Port Everglades Inlet. If all three elements are carried out, the program will reduce the extent and frequency of beach nourishment projects, particularly in Dania Beach, Hollywood, and Hallandale.

The beaches of Broward attract 7.2 million visitors per year, resulting in $422 million in spending in the county. Broward's beaches contribute $548 million per year to the county economy, $803 million to the regional economy, and $598 million to the state's economy annually. The beaches result in the creation and sustenance of 17,700 full-time jobs in the county; 26,000 jobs in the region; and 19,000 jobs in the state. Tax revenue resulting from Broward's beaches contributes $29 million to local government tax coffers, including $10 million to Broward County Schools, and $19 million in state tax revenues annually.

Florida's beaches attract two million international tourists annually, who spend approximately $1.1 billion in the state.

Regional Research Associates, 1987. Economic and Fiscal Analysis of Captiva Island.

This is a report on five analyses for Captiva Erosion Prevention District projects.

Regional Research Associates, 1992. Impact of Captiva's Beaches on Property Values and Taxes.

This is an analysis of the impact on property values of two beach restorations on Captiva Island.

Somerville, 2002. Beach Nourishment – Local Perspectives: Broward County, Florida.

This report presents the same information as in Higgins, 2002.

Stronge, 1992. The Economic Impact of the Marco Island Beach Restoration: A Preliminary Analysis.

The impact of Marco Island beach restoration was analyzed preliminarily for appreciation of property values and estimated impact on property tax revenues.

Stronge, 1995. Beaches and Tourism: An Update.

This article presents information on data from 1994.

Stronge, 1998a. The Economic Benefits of Florida's Beaches: Local, State and National Impacts.

The author summarizes the results of his microeconomic studies on Florida's beaches as a first step in determining the impact of the state's beaches on the economy. Specifically, he estimates the impact of Florida's beaches on federal income tax revenues, the contribution to the national balance of international payments through international tourism, and international investment in beachfront property. Findings reveal that the state's beaches increase coastal property values, raising nearly $16 billion in property values, with $8.8 billion in spending, providing nearly 250,000 jobs and $4.7 billion in payrolls. Beaches contribute $320.6 million in local government revenues, $260.1 million in state sales tax revenues, and $428.6 million in personal and corporate federal income tax revenues. The largest benefactor of tax revenues from Florida's beaches is the federal government, taking 42 percent, followed by local government at 32 percent, and state government at 26 percent. On the international front, about two million international tourists visited Florida's beaches in 1997, spending more than $1 billion. It is estimated that foreigners own about 4.8 percent of coastal properties in four study sites on both the east and west coasts of Florida, at a value of about $3.5 billion.

Stronge, 1998b. Recreational Beach Use on Palm Beach Island 1997-1998.

This study analyzed a survey conducted on Palm Beach Island, the purpose of which was to determine geographic origins of beach users to help determine recreational

benefits of the island's beaches. The survey was conducted over an eight-day period in March and a six-day period in July in the beaches of the Town of Manalapan. Respondents were selected at random along a 12-mile length of beachfront. This was the third interim report for an economic study of the Beaches of Palm Beach Island. The number of beach visits during the 1997-98 year was estimated at 830,213. In contrast to most of the other beaches of South Florida, beach use in Palm Beach Island was not greater in the winter than in the summer season. This finding may be the result of unusually poor weather in the winter of 1997-98.

On average, a beach party consisted of four people who stayed for nearly three hours. The beach experience was valued at $4.61 by the average beach goer. This figure was a little lower than the reported value by users of beaches in 1995-96 in Delray Beach, and higher than that reported in Broward County ($4.04).

Beach use by residents of the island accounted for 6.3 percent. The largest percentage of beach users included residents of other parts of Palm Beach County (from the mainland). In the winter there was also "substantial use by out of state tourists and seasonal residents" (p. 9). Almost 80 percent of visits in 1997-98 were residents of or visitors staying on the mainland.

Stronge, 1999. Matching Costs and Benefits of Beach Projects.

This study analyzed apportionment methods used in Florida for costs of beach projects at the local level. The Town of Palm Beach is used as an example. Typically, beach improvements in Florida are funded by a combination of federal, state and local contributions. Depending on the extent of public ownership and public access, federal funds can be up to 65 percent of the project cost, while the state funds up to 50 percent of the non-federal share. The minimal amount funded locally is 17.5 percent. While counties often rely on tourist development or "bed" taxes for beach improvement funding, cities lack the authority to levy such taxes. Cities generally rely on some form of property tax. Such property taxes can be levied in several ways (e.g., ad valorem, based on front footage, using tiered millages, or based on an economic analysis of benefits). This paper focused on alternative forms of levying property taxes to fund the local share of beach improvement projects.

Ad valorem property tax is the single largest source of local tax revenues for Florida cities. Ad valorem property tax implies that all property owners pay the same tax millage rate. (If the tax millage rate is 5 mills then each property owner pays one-half percent of the taxable value of their property.) Often ad valorem property taxes are abandoned by levying taxes that fall disproportionately on beachfront owners. This is because beachfront properties receive more storm damage protection from renourished beaches than do properties off the beach. When property values decline with distance from the beach, ad valorem taxes reflect this decline in benefit. However, the barrier islands in Florida often result in u-shaped property values; that is, values decline with initial distance from the beach but rise again as the "bay" side of the island is approached.

Assessment against owners based on the number of feet fronting the beachfront is the opposite of ad valorem taxation. This method can be more expensive to administer due to the need for establishing a special taxing district. Another disadvantage is that such assessments are not deductible from federal personal income tax. When conditions along the beachfront are similar among property owners, such as beach width and rate of erosion, front foot assessments work best. However, this method places the entire burden upon beachfront property owners, when others may receive benefits from recreational and economic development activities.

Two alternate methods have been used. Tiered millages exist in cases where beachfront properties have one tax rate while inland properties have at least one additional tax rate. Benefit-based assessments are more complicated and based on an economic analysis of the benefits of the improvements.

MANAGING COASTAL EROSION

Barnett, 1999. Palm Beach Island Comprehensive Coastal Management Plan.

A Comprehensive Coastal Management Plan (CCMP) Update was recently prepared for Palm Beach Island, being considered for adoption by the Town of Palm Beach. The CCMP encompass the 15.7-mile-long Atlantic shoreline of Palm Beach Island. The plan provides a clear indication of the extent of current shoreline erosional stress, identifies shoreline erosion control solutions, identifies probable storm protection benefits,

establishes an estimate of costs, and presents an optimal schedule for restoration and maintenance over 10 years.

Dean, 1988. Sediment Interaction at Modified Coastal Inlets: Processes and Policies.

Inlets and channel entrances make a major contribution to the economy, safety, and quality of life for those conducting commercial activities, recreating, and residing in the coastal zone. Natural entrances in Florida, the East Coast inlets in particular, are discussed and several case studies are reviewed. Sediment interaction at modified inlets and the accompanying effects on adjacent beaches are addressed. Appropriate remedial measures in cases of adverse impact are described.

The author reports that sediment losses to adjacent beaches may result from: "(1) blocking of the net longshore sediment transport by the updrift jetty, (2) flow of sand over and through low and permeable jetties, (3) jetting of sand farther seaward to the ebb tidal shoals, and (4) removal of sand to maintain channel depth with disposal in deep water." Hence, the most desirable inlet management policy must reinstate or improve upon the natural transport processes around the inlet, employing a system that captures the net longshore sand transport in the active surf zone and depositing it downdrift in a location where transport continuity will be maintained.

The author recommends that all coastal states should enact legislation recognizing beach-quality sand as a precious resource. Placement of this sand in deep water where it is lost to the sand-sharing system should be prohibited. A concerted field program should be conducted to gain a better understanding of sand transport processes and hydrodynamics near inlets.

Dombrowski and Walther (1999). St. Joseph Peninsula – Response to Natural Erosion.

This report on the St. Joseph Peninsula documents shoreline conditions and evaluates beach management and protection alternatives. This peninsula is a coastal barrier spit, located in the western portion of Gulf County, Florida, on the state's northwest coast. The northern two-thirds of the peninsula comprises St. Joseph Peninsula State Park; south of the park is private property and county-owned beach access points. The southern end is

federally owned property in the vicinity of Cape San Blas. Historically, the rates of erosion in the southern section have been in excess of 20 feet per year, among the highest in Florida. This study examined four potential courses of action: taking no action, road relocation, structural stabilization of the shoreline, and beach nourishment. (additional information unavailable)

Douglas and Walther, 1993. Brevard County Erosion Control Project Justification.

Following a preliminary federal finding that no erosion control projects were needed in Brevard County, Florida, further analysis revealed that additional erosion control measures were in fact justified. While potential recreational benefits are minimal in Brevard, the project was justified based on storm damage prevention and loss of land benefits. Conclusions were as follows: 1) restoration of Brevard County beaches was economically justified; 2) current federal regulations neither acknowledged prevention of loss of public lands as a benefit, nor reflected Florida's Coastal Armoring Policy; thus, damage prevention benefits were underestimated; and 3) engineering judgment is required to identify shoreline segments with upland improvements with a high value and susceptibility to erosion to justify erosion control on an economic basis.

Douglass, 2002. Saving America's Beaches: The Causes of and Solutions to Beach Erosion.

This book provides a three-part prescription for healthy beaches by proposing "backing off," "bypassing sand," and "beach nourishment." First, backing off entails building back away from the water (behind a setback) so that erosion does not become problematic. Second, dredged sand can be artificially bypassed around ship channels to downdrift beaches, thereby restoring the natural movement of sand along and to the beach. Third, despite criticisms that it is unnatural, expensive, and eventually the sand washes away, beach nourishment, the direct placement of large amounts of good-quality sand used to widen the beach, has been found to be effective and has resulted in saving many of America's favorite beaches.

Finkl, 1996. Potential Impacts of a Federal Policy Promoting "No New Beach Replenishment Activities" on U.S. Shorelines: Iterations for SE Florida.

Beach erosion occurs from both natural processes and man-induced perturbations. Accelerated rates of erosion occur downdrift of stabilization inlets and erosion fronts migrate downbeach of jetties. Without replenishment of sand, losses will occur to artificially replenished beaches as well as natural beaches. Broward County has an annual beach volume loss of three to five percent. At this rate, only about two-thirds to one half of the Atlantic dry beach width will remain after one decade without sand replenishment. "A federal management policy of 'no new beach replenishment' will in the first decade: (1) cause accelerated loss of beaches, (2) place a larger proportion of the coastal population at risk from flooding, (3) increase vulnerability of coastal infrastructure to floods and inundation, (4) decrease revenue from tourism, and (5) result in higher costs for future shore protection" (p. 281).

Friedman and Merrel, 2000. Coastal Erosion and the National Flood Insurance Program.

According to a study by the H. John Heinz III Center for Science, Economics and the Environment (Heinz Center), in the next 60 years coastal erosion may claim one out of four homes/buildings within 500 feet of the U.S. shoreline. The study was conducted for the U.S. Congress and funded primarily by the Federal Emergency Management Agency (FEMA). Two recommendations for FEMA implementation were made: 1) erosion hazard maps with location and extent of coast areas subject to erosion should be prepared; 2) when setting flood insurance rates along the coast, the cost of erosion losses should be included.

"Erosion undermines waterfront houses, businesses, and public facilities, eventually rendering them uninhabitable or unusable" (p. 6). As the shoreline moves inland, nearby structures are brought closer and closer to the water, increasing the risk to those structures. The primary insurer of this hazard is the National Flood Insurance Program (NFIP). NFIP does not map the risks faced by homeowners. Researchers concluded that damage to structures and loss of land due to erosion may result in $500 million in property losses.

A strong correlation was found between housing price and number of years before erosion was likely to threaten the house. Houses near rapidly eroding shoreline are valued less than identical houses near relatively stable shoreline. An example was given on the Atlantic Coast: a house built 50 years from the shoreline was worth approximately 90 percent of an identical house standing 200 years from the shoreline.

Higgins, 2002. Beach Erosion Control and U.S. Policy – Local Perspectives: Broward County, Florida.

This was a briefing on the restoration, enhancement, and erosion management of Broward County's beaches. The 24 miles of coastline in Broward front the Straits of Florida, that area of the Western Atlantic Ocean lying between Florida and the Bahamas. Broward's coastline consists of sandy beaches with generally mild wave climate. The county's explosive growth over the last several decades has led to increasing pressure on its marine resources. Beach functions include: 1) serving as habitat for many species of plants and animals; 2) protecting the fully developed shorefront from storm surges; and 3) providing recreational opportunities for beach visitors. Most of Broward's beaches are in a state of chronic erosion for a number of reasons: 1) there is limited sedimentary input; 2) two stabilized inlets are in place; 3) the shorefront is fully developed; and 4) the beaches are subject to periodic Northeast storms and often severe tropical weather systems.

In 1963, the U.S. Army Corps of Engineers conducted a study of Broward's coastline. As a result, the 1965 River and Harbors Act authorized the Broward County Beach Erosion Control Project and the Hillsboro Inlet Navigation Project. Under this authority, the county was divided into three segments with construction performed by local interests and followed by federal reimbursement for eligible costs. Upon implementation of the 1996 Water Resources Development Act extension, federal participation was authorized for 50 years.

To date, no federally authorized work has occurred in Segment I. Six reimbursable projects were conducted in Segments II and III with federal assistance. "All projects involved dredging material from borrow areas offshore and pumping sand onto the beach" (p. 2). The projects were as follows:

- 1970 -- Pompano Beach and Lauderdale-by-the-Sea (2.8 miles in Segment II)
- 1976 -- John U. Lloyd Beach State Park (1.5 miles in Segment III)
- 1979 -- Hollywood and Hallandale (5.2 miles in Segment III)
- 1983 -- Pompano Beach and Lauderdale-by-the-Sea (5.2 miles in Segment II)
- 1989 -- John U. Lloyd Beach State Park (1.5 miles in Segment III)
- 1991 -- Hollywood and Hallandale (5.2 miles in Segment III)

Project performance has exceeded design expectations. Segment II is nearly self-sufficient due to sand bypassing from navigation dredging at the Hillsboro Inlet. Segment III suffers from chronic sand starvation due to deepdraft channel and rock jetties at Port Everglades that block the predominantly southerly littoral drift along eight miles of the segment. More frequent periodic nourishment has been undertaken in Segment III to counter the chronic erosion.

A comprehensive nourishment project has been proposed by the county to address the erosion problem on a regional basis. The project would take sand from five offshore borrow sites and place it along 11.8 miles of beach.

Jones, 2000. Coastal Erosion in the United States: What Can Be Done?

The author delivered the keynote address at the 14th Annual National Conference on Beach Preservation Technology. He cited the above-referenced Heinz Center report, which stated that in the next 60 years one in four structures within 500 feet of the coast will be lost to erosion (Heinz Center, cited by Jones, 2000 – available at www.heinzctr.org). The author pointed out that this report resulted in controversy over the "assumptions made and methods used to quantify erosion rates and estimate damages" (p. 1). However, the report can be used as a starting point when refining such methods in the future.

To solicit recommendations, conference attendees and speakers were asked to complete the following statement: "If I were 'King For A Day,' I would _____." The answers were as follows (pp. 4-5):

- develop a consistent erosion rate database for the nation.
- provide a clear picture of the costs of erosion, and arrive at a common understanding of the shoreline management alternatives available to us.
- make shoreline recreation available to urban areas.
- determine the causes of insufficient sediment supply to our coasts.
- develop consistent policies and approaches by all federal agencies (recreation is not a four-letter word).
- institute rational shoreline management policies.
- have FEMA recognize the flood protection benefits of beach nourishment.
- continue our efforts to manage beaches and littoral sediment on a regional basis.
- emphasize that solutions to erosion should be determined locally.
- fund the National Shoreline Study.
- the economics of beaches and beach management should be viewed broadly and rationally.
- states without beach management programs should be brought on board.
- develop sustainable beach management plans.
- have all levels of government work together.
- eliminate conflicts between federal agencies.
- have the Corps be more proactive, and less reactive.
- involve USGS in coastal management and policy decisions.
- cease disposal of beach quality sediments outside the littoral system.
- reconsider the use of hard structures.
- treat all hazard areas the same – it is not reasonable to mandate retreat from coastal areas while we continue to occupy areas susceptible to one or more of the following: riverine flooding, earthquakes, blizzards, landslides, tornadoes, or other natural hazards.
- develop specific policies, achieve consensus, and convince politicians to implement.

Olsen, 1996. South Beach Stabilization Project (A Presentation to the National Conference on Beach Preservation Technology).

This presentation reported on the successful stabilization project on Tybee Island, Georgia, in the spring of 1995. The island has a long history of shoreline erosion and numerous erosion-control efforts have been undertaken in recent times.

Rogers, 2000. Beach Nourishment for Hurricane Protection: North Carolina Project Performance in Hurricanes Dennis and Floyd.

This paper was delivered at the National Beach Preservation Conference, Maui, HI (Aug. 7-10, 2000). The author states that beach nourishment efforts undertaken by the U.S. Army Corps of Engineers in North Carolina have performed as expected. After Hurricanes Floyd and Dennis, no buildings were found to have been threatened by erosion inside the project limits, although 968 buildings were destroyed outside the protected zone. Results of Hurricane Fran are also analyzed. Beach nourishment, which is properly designed and maintained, is effective in protecting against hurricane impacts. Smaller nourishment projects have been effective against moderate, long-term erosion; however, such efforts may not offer major erosion and wave protection during severe storm events, such as hurricanes.

Schmidt, 1993. Impacts of Hurricane Andrew on the Beaches of Florida.

The author summarizes the cooperative efforts of the U.S. Army Corps of Engineers, the Florida Department of Natural Resources Division of Beaches and Shores, and the U.S. Army Corps of Engineers Waterways Experiment Station Coastal Engineering Research Center (CERC) in response to the impacts of Hurricane Andrew on South Florida beaches.

FINANCING NOURISHMENT

Mann, 1996. Beach Nourishment Benefit Estimates: Past, Present and Future? (A Presentation to the National Conference on Beach Preservation Technology).

One way for local government to finance beach nourishment is through the federal government's Shore Protection Program. Federal participation is based on three criteria: 1) the project is economically justified and environmentally acceptable; 2) federal participation is otherwise warranted; and 3) the current administration budget priorities are met in the project. This paper focused on the economic justification component, including past practices of estimating benefits, improvements in benefit estimation, and future possibilities.

Justification requires designing the most economically efficient project, with benefits exceeding costs, and a benefit-to-cost ratio greater than 1.0. Benefits tend to be classified as related to storm damage reduction or recreation enhancement. Storm damage reduction benefits generally consist of reduction in structural damage, coastal armoring prevention, and reduction in loss of privately owned land. For publicly owned land, the benefits are recreational and occur when additional space is provided on a beach where there is sufficient demand (and space is not limited by insufficient parking or beach access). The U.S. Army Corps of Engineers can provide storm damage reduction and recreation enhancement benefits calculation. Regulations imply that benefits be evaluated only for the fill area; however, recent research indicates that adjacent shorelines also receive benefits and should be included in the regulations and in calculating costs and benefits.

Since 1974, the State of Florida has monitored its valuable beaches for the purpose of regulating construction along its vast shoreline. One researcher used this data to evaluate fill movements and found that the Delray Beach nourishment project, which began in 1973, resulted in widening of not only the fill area, but also the updrift and downdrift beaches.

Some benefits are not considered in the estimation equation, including enhancement of property values, public infrastructure protection, and the value of a beach visit (Stronge, cited by Mann, 1996). An additional benefit is the prevention of impacts to barrier island wetlands (Basco, cited by Mann, 1996).

MONITORING BEACH NOURISHMENT PROJECTS

Davis, Terry and Ryder, 1993. Design of Beach Monitoring Programs with Florida Examples.

Beach nourishment projects have tremendous costs and a limited effective lifetime. The authors suggest that detailed monitoring of such projects is important for long-term coastal management, particularly with respect to beach nourishment. Monitoring should include five areas: 1) the borrow site; 2) shoreline changes; 3) sediments; 4) coastal processes; and 5) biological impact. Regular and long-term data collection was recommended, and monitoring results of recent Pinellas County projects were reviewed.

Weggel, 1995. A Primer on Monitoring Beach Nourishment Projects.

Beach nourishment lasts on average three to ten years, depending on the specific site and the storms that occur. Because of this, beach nourishment, when used as a buffer against wave attack and coastal flooding, as well as providing a recreational beach, is not well understood. Frequently, nourishment is perceived "as the futile exercise of 'pouring sand into the sea' by the layperson and also occasionally by the uninitiated scientist or engineer" (p. 20). Beach nourishment protects upland development from waves and flooding; it does not eliminate or significantly alter the cause of erosion. It simply delays damage to both private and public property while simultaneously providing recreation. Although projects are costly and short-lived, the economic return on the investment far outweighs the costs. Note that the benefit-to-cost ratio must exceed 1.0 for a project to qualify for federal funding.

Among other criticisms of beach nourishment is that it encourages more coastal development, which leads to greater losses from storm damage. In the environmental arena, impacts can be beneficial as well as adverse. Sea turtles provide an example. Beach nourishment can be done in a way that discourages turtle nesting; on the other hand, restoration of wide beaches may allow turtles to re-establish nesting sites.

Monitoring, the systematic collection of data on physical, environmental, and economic parameters of a project, may improve understanding of this multifaceted issue. Typically, information on project performance has been anecdotal as monitoring has not been widespread. Where monitoring has been conducted, it generally has followed physical performance only. Initial loss after the first storm is usually anticipated in a project's design. The significant, but anticipated shoreline recession is often perceived as a failure in design when in fact the process allows for a more stable and flatter profile.

Monitoring can help identify persistent "hot spots" of erosion and assist with decision-making on when to renourish and how much sand to use. It can identify adverse environmental impacts that may lead to design or construction improvements. The author also emphasizes the importance of monitoring biological and economic impacts.

Weggel, Morreale and Giegengack, 1995. The Ocean City, New Jersey, Beach Nourishment Project: Monitoring Its Early Performance.

This paper reports the results of monitoring conducted on a beach nourishment project in Ocean City, New Jersey. Among the authors' conclusions was the finding that obtaining directional wave data at a site near the project is essential when interpreting causes of observed beach response.

METHODOLOGY

Fore and Wutkowski, 1993. Kure Beach, NC, Beach Nourishment Project: Plan Formulation Using Wilmington District's Coastal Storm Damage Assessment Model "COSTDAM"

Traditionally, plan formulation for federally cost-shared beach nourishment projects undertaken by the U.S. Army Corps of Engineers was tedious and time-consuming. COSTDAM is a computer program-spreadsheet model that has enhanced and expedited the process. Information on coastal engineering, economic analysis, and real estate is programmed into two files. One portion of the model consists of the program, which generates project benefits from decreased storm and long-term erosion damages. The other portion of the model is a spreadsheet, which combines the damage benefits with

other benefits and costs and then calculates total and incremental costs, benefits, and benefit-to-cost ratios.

Stronge, 1993a. The Economic Analysis of Beach Restorations: The State of the Art.

The author provides an overview of the "economic analysis of beach restorations" (p. 9). Standard methodologies for evaluating the benefits of beach restoration were reviewed. The author contends that these standard methods define benefits very narrowly, perhaps due to compromise situations in which underestimations are made deliberately to "appease opposition to restorations" (p. 9). In determining storm damage prevention benefits, the methodology does not allow for development/redevelopment of properties, or benefits outside the project area. Moreover, public infrastructure benefits are underestimated. Recreational benefits methodology tends to result in excessive resources for parking and access requirements, does not account for demographic and income effects on demand, and fails to account for the value of beach visits after restoration. The author suggests that the best approach to assessing beach restoration benefits and developing related methodologies is through follow-up studies. Benefits and disbenefits can be better evaluated after political controversy has subsided.

ENGINEERING

Chesnutt, 1996. The Corps of Engineers' Response to the Marine Board Report (A Presentation to the National Conference on Beach Preservation Technology).

This report served to express the Corps of Engineers' response to the Marine Board Report. The Corps strongly concurs that, beach nourishment is one of the viable tools in its toolbox of technologies, for the engineer. In addition, the observation was made that FEMA should have been included in report.

Rosati, 2000. Application of a Regional Sediment Budget Analysis System to Florida's East Coast (A Presentation to the National Conference on Beach Preservation Technology).

Both state and federal agencies (in particular, the Florida Department of Environmental Protection and the U.S. Army Corps of Engineers) are realizing that a systems approach to coastal zone management has greater long-term merit. Moreover, cost savings can be realized through coordination of projects at the regional level. Regional sediment management demonstration projects, for example, are being formulated in a number of coastal Corps districts. It is anticipated that these projects may extend the life of beach nourishment projects, among other benefits including the promotion of inlet sand bypassing and maximizing the infusion of beach-quality sand into the system.

Rosati et al., 2001. Application of a Regional Sediment Budget Analysis System to Florida's East Coast (A Presentation to the National Conference on Beach Preservation Technology).

This paper describes the U.S. Army Corps of Engineers' National Regional Sediment Management (RSM) Demonstration Program, together with the State of Florida's RSM program. The RSM demonstration program is now well underway in six coastal Corps districts. Two of the District projects in Florida have prepared RSM plans in conjunction with the Office of Beaches and Coastal Systems of the Florida Department of Environmental Protection. The paper discusses regional numerical models, regional economics and benefits, and Geographic Information Systems designed for RSM. Under RSM, there are two tracks – cost savings and wise management of sand resources – to be considered when determining the economic effects of evaluating alternative sand management activities. The authors note that a range of anticipated benefit categories include (p. 300):

- National Economic Development
    - Storm Damage Reduction
        - Commercial, residential structures
        - Undeveloped land
        - Infrastructure
    - Recreation
        - Domestic

        - International
    - Navigation
        - Reduced operations and maintenance outlays
- Environmental Quality
    - Ecosystem restoration
        - Beach habitats, dunes, freshwater wetlands
        - Endangered species
    - Aesthetics
    - Cultural resources
- Regional Economic Development
    - Income
    - Employment
    - Tax receipts
- Other Social Effects
    - Urban and community impacts
    - Life, health, safety
    - Environmental Justice

Tackney, 1996. An Alternate Method of Regulating Longshore Transport Rates.

This research analyses developments in computer modeling of wave refraction and longshore transported and improved wave databases. Such information can provide engineers with new perspectives for evaluating shoreline changes and predicting shoreline response to coastal projects. Data are predicted to assist in managing shoreline changes.

Walker and Brodeur, 1993. The California Beach Nourishment Success Story.

Beach nourishment projects in California include new fills to widen beaches and maintenance dredging projects to bypass and backpass sand that accumulates in harbors. A new technique, which emulates a more natural beach fill process by placing dredged material in the littoral zone to nourish the beach through wave action (which carries coarser sand onshore), was discussed. This method enhanced surfing opportunities and

did not directly interfere with recreation and environmentally sensitive activities on the beach. In California, beach nourishment projects are reported to be successful "in restoring beaches, mitigating for adverse impacts of navigation projects, and preserving and enhancing recreational opportunities" (p. 239).

Several case studies in the area were reviewed. Over a 50-year period several beaches in Southern California have been widened. Sand management at navigation projects has substantially widened and tended to stabilize beaches, for about 50 years in many cases. Many of the beach systems were not necessarily stable prior to the navigation projects. Although "by-passing maintenance projects have successfully mitigated adverse effects" (p. 257) many reaches of beach are "losing sand to submarine canyons, offshore regions, and other manmade natural sinks" (p. 257).

A BIBLIOGRAPHY

ON THE ECONOMICS OF BEACHES

PREPARED FOR

THE BUREAU OF BEACHES AND WETLAND RESOURCES

OF THE FLORIDA DEPARTMENT

OF ENVIRONMENTAL PROTECTION

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Submitted by

The Anthony James Catanese Center
for Urban & Environmental Solutions
at Florida Atlantic University

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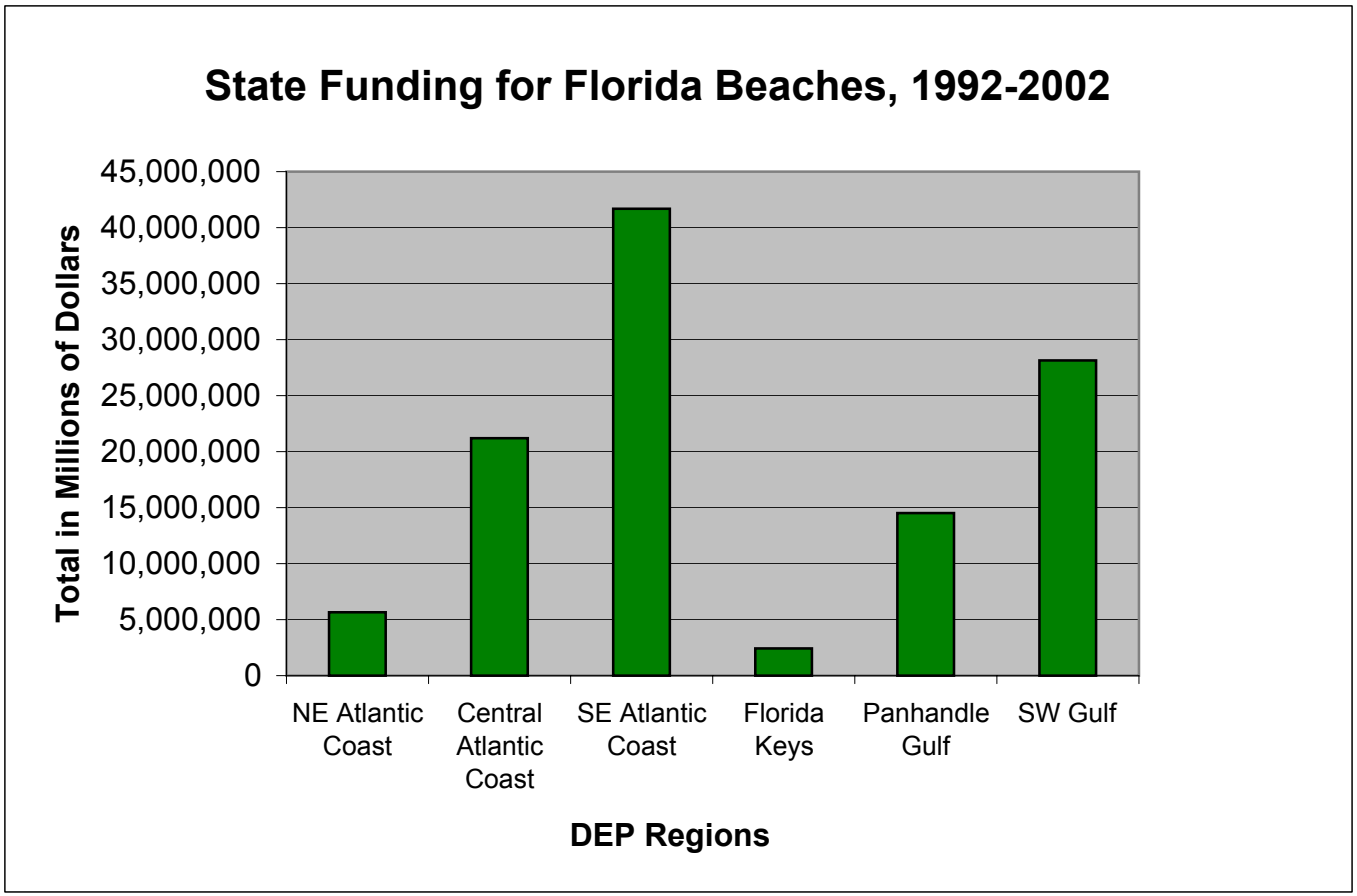
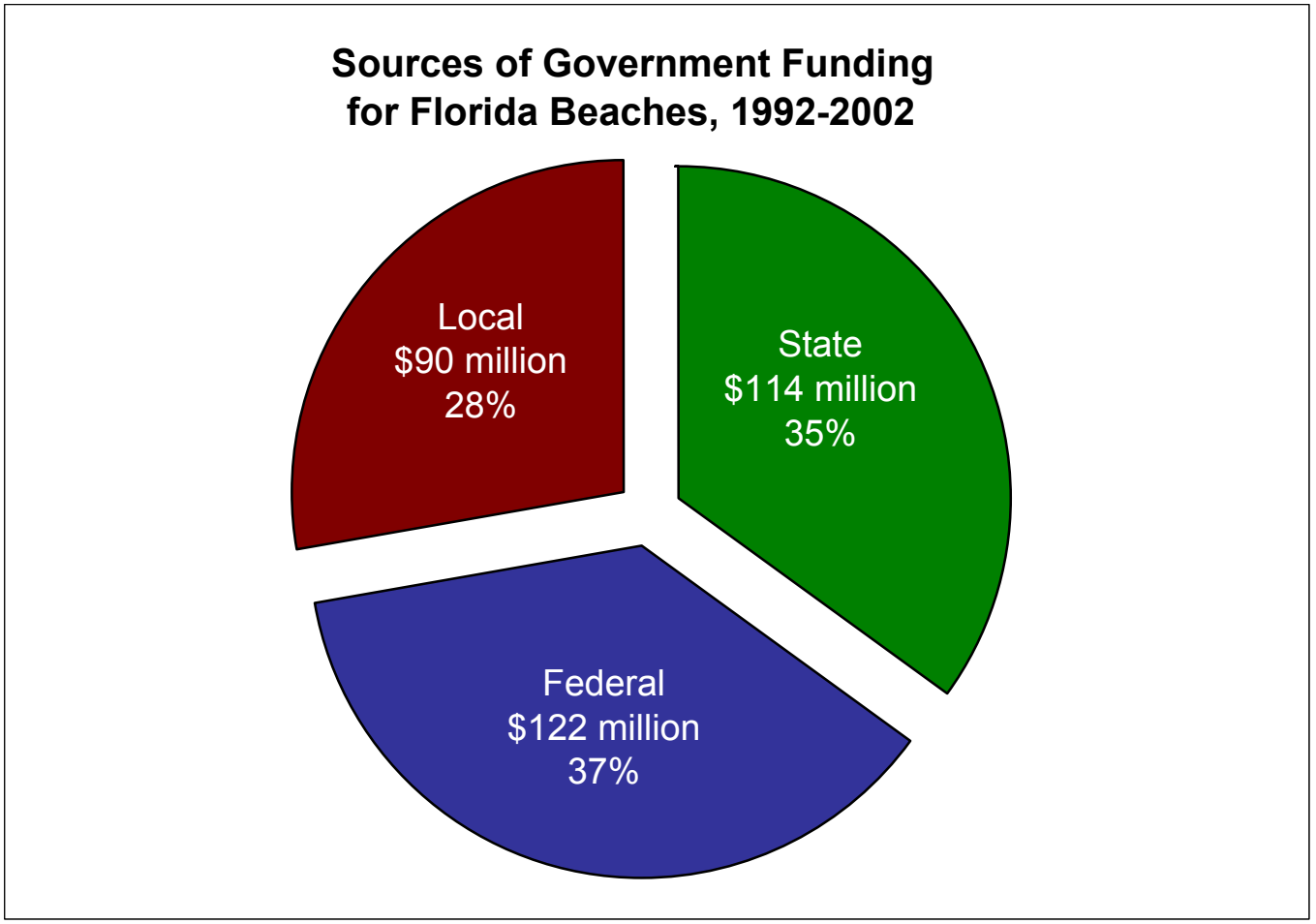
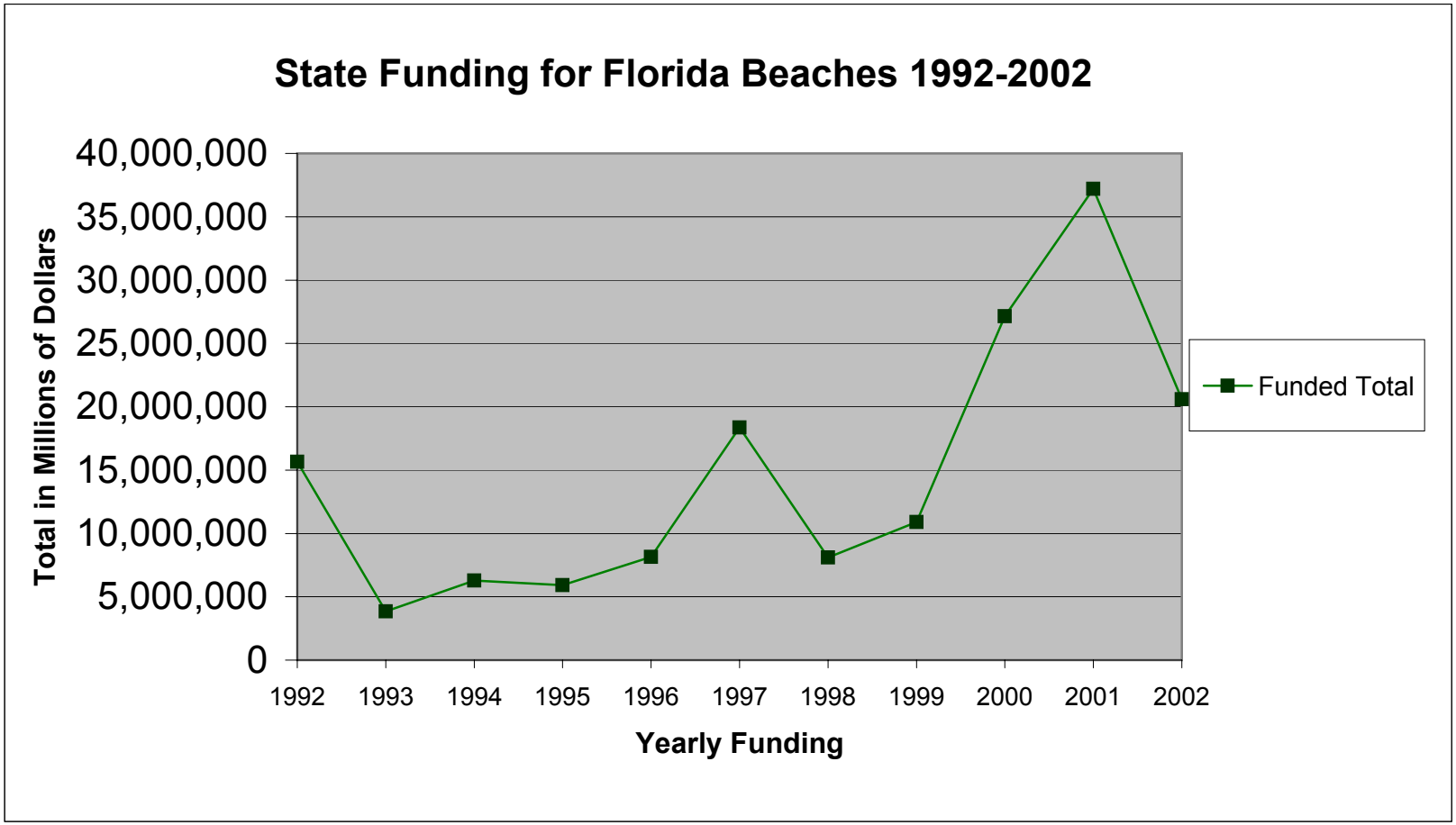
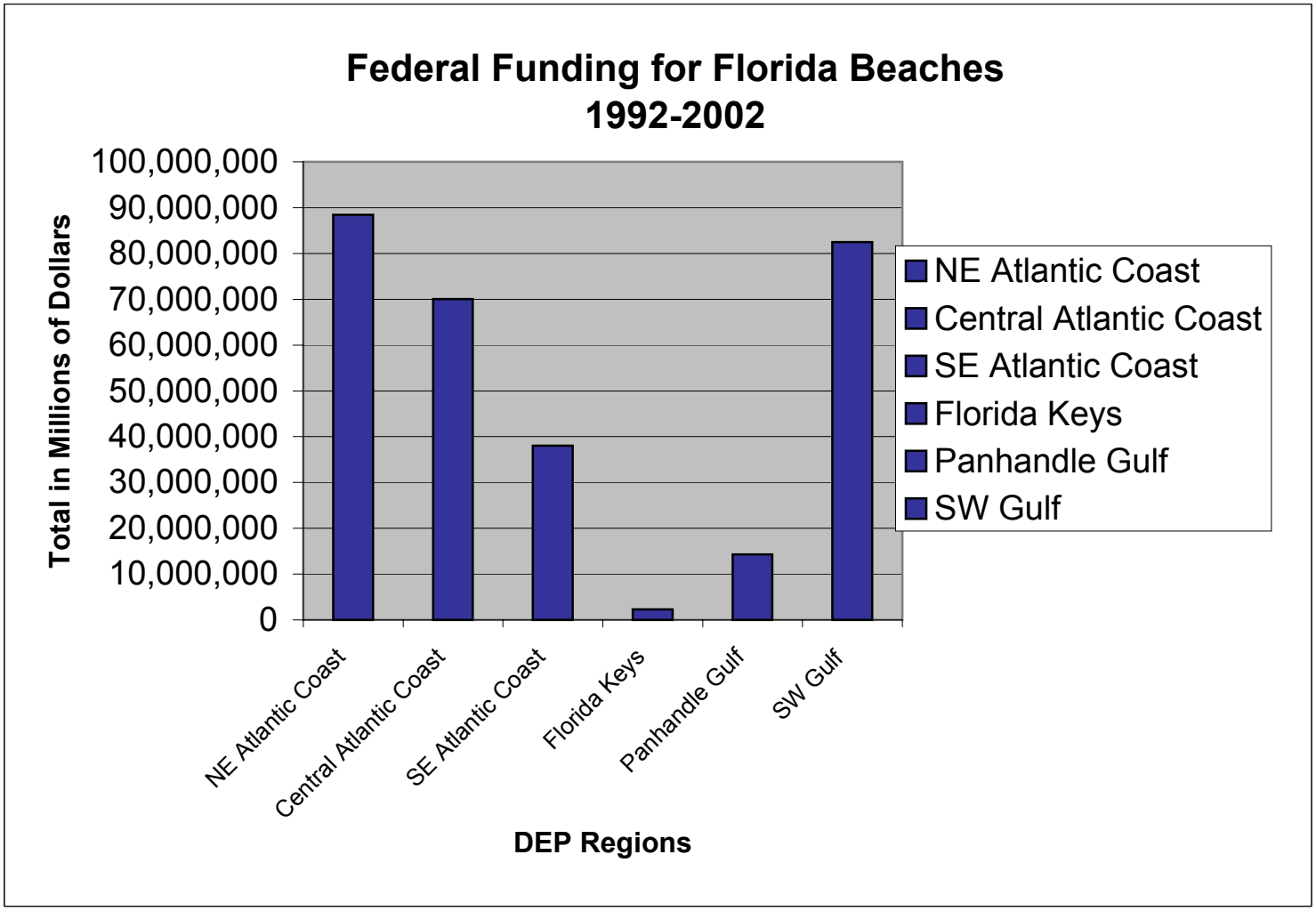
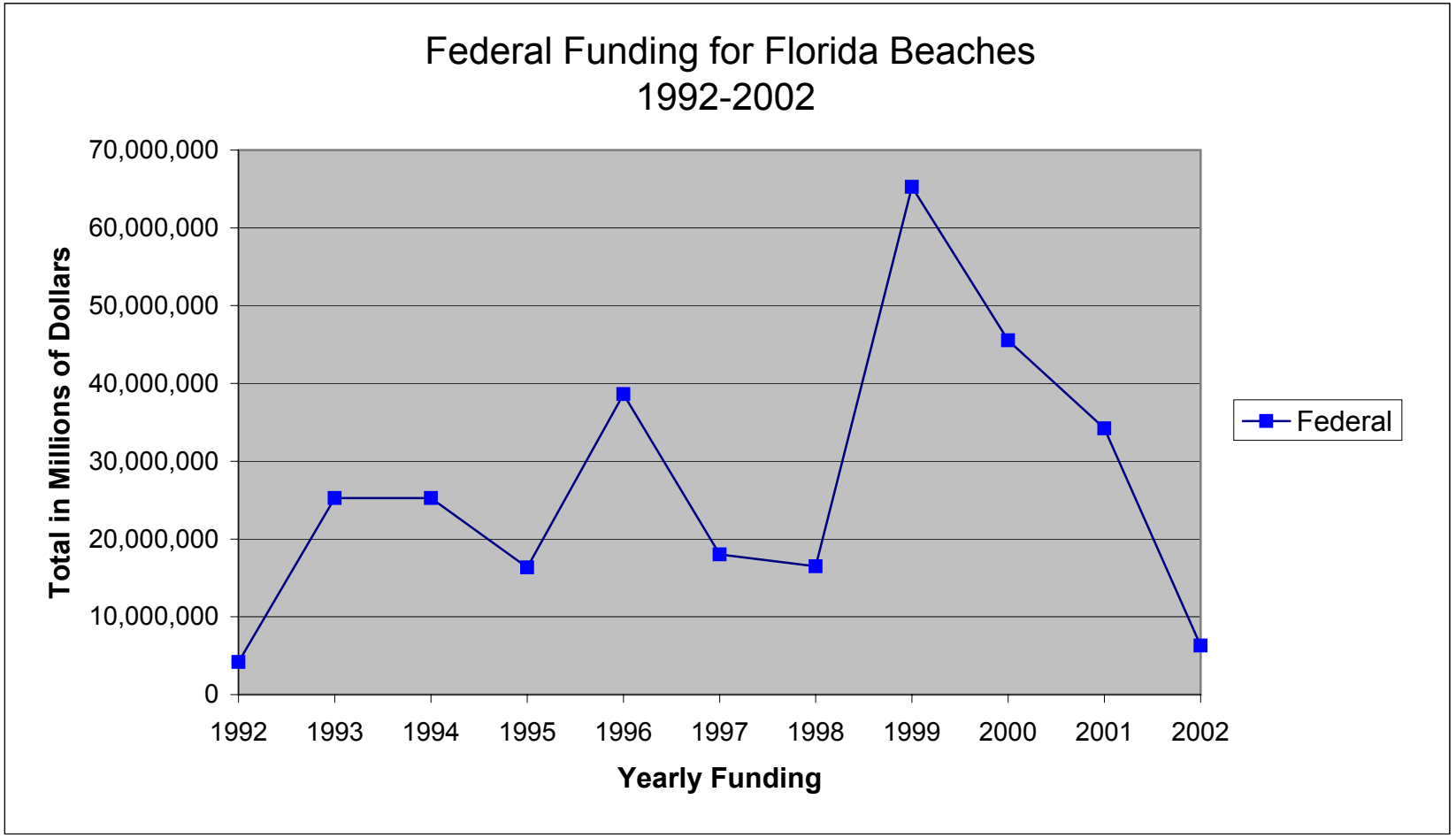

State Funding for Florida Beaches, 1992-2002
Total in Millions of Dollars
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
NE Atlantic Coast
Central Atlantic Coast
SE Atlantic Coast
Florida Keys
Panhandle Gulf
SW Gulf
DEP Regions

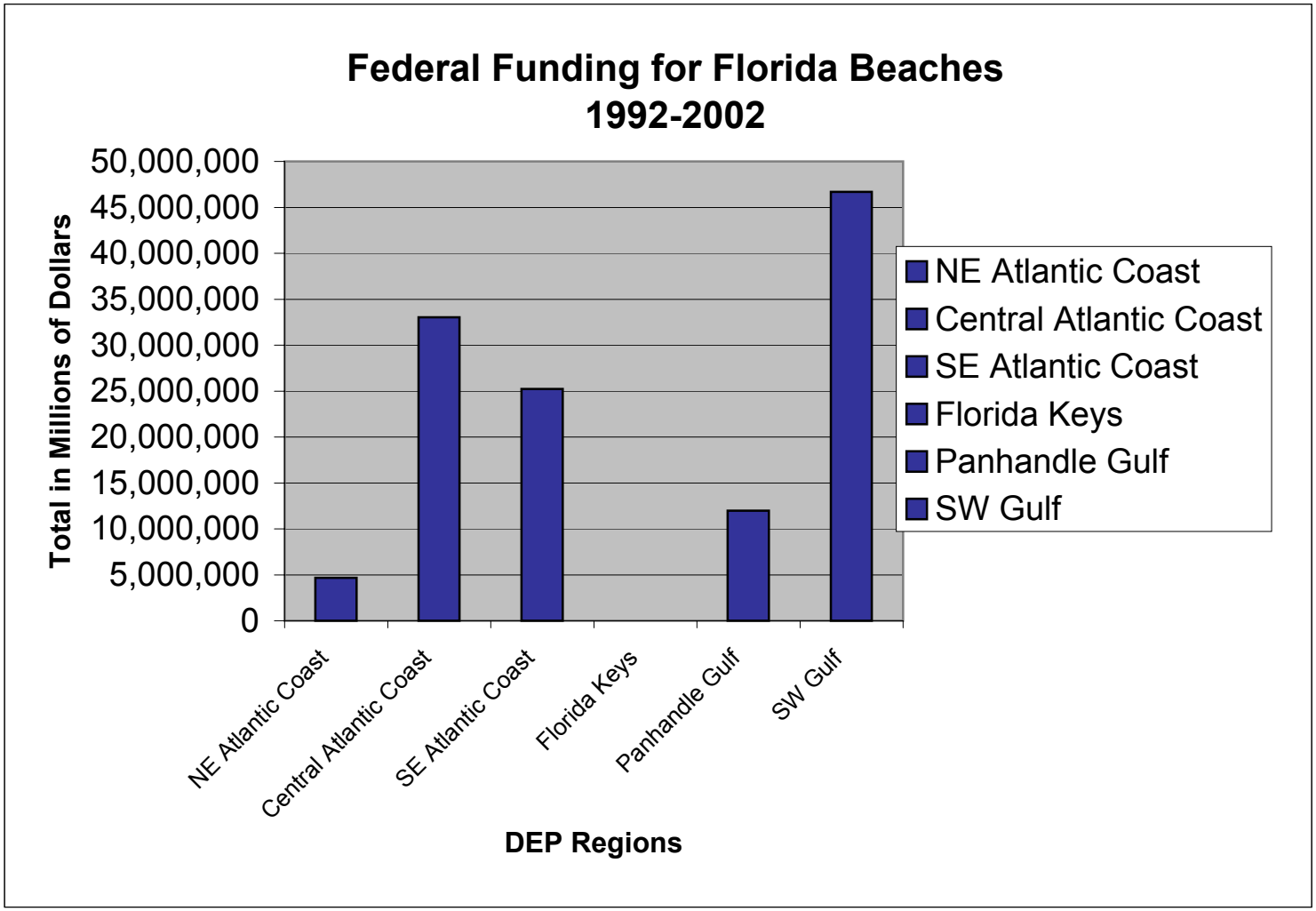

Sources of Government Funding
for Florida Beaches, 1992-2002
Local
$90 million
28%
State
$114 million
35%
Federal
$122 million
37%

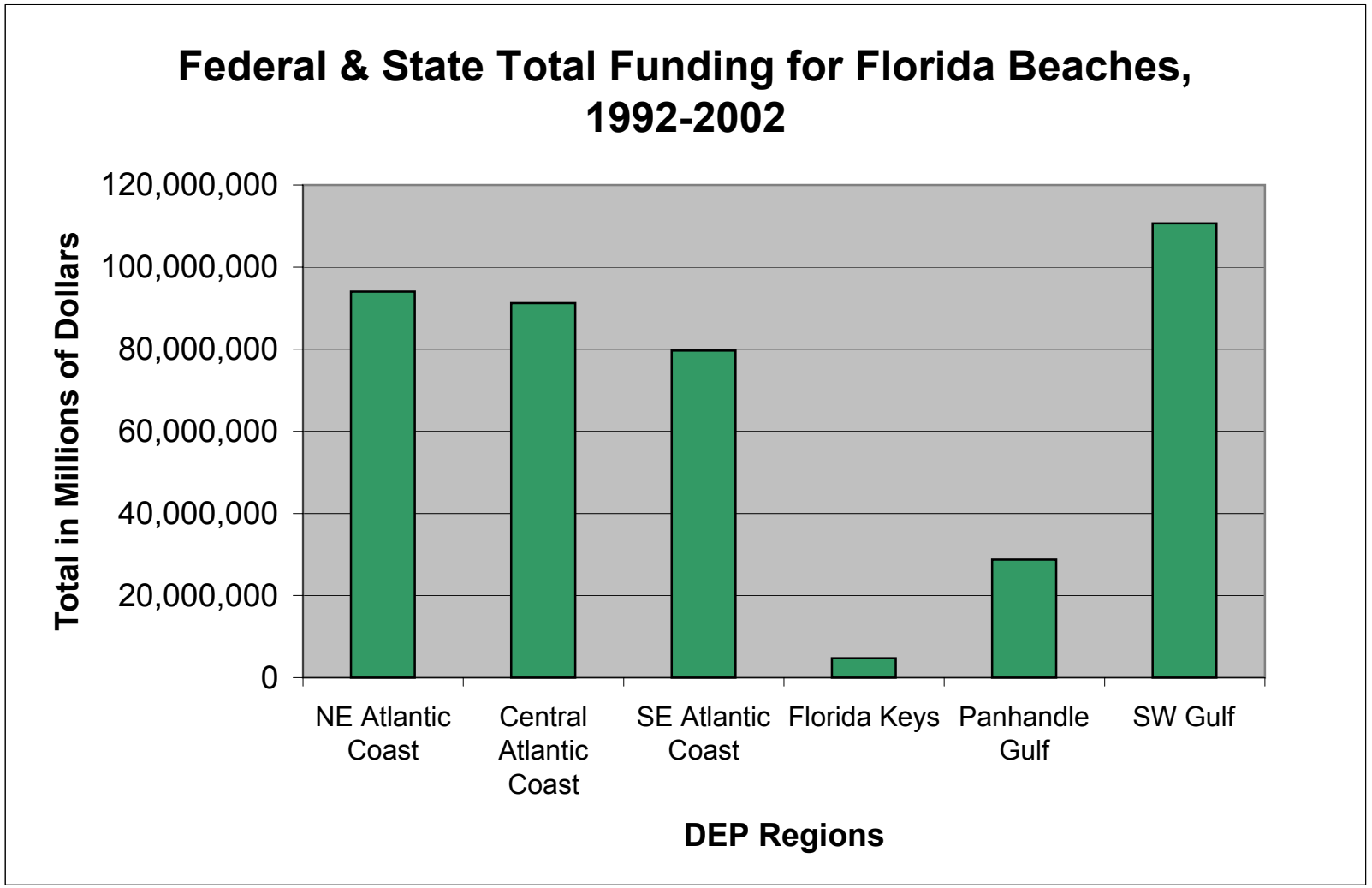

State Funding for Florida Beaches 1992-2002
Total in Millions of Dollars
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Yearly Funding
Funded Total

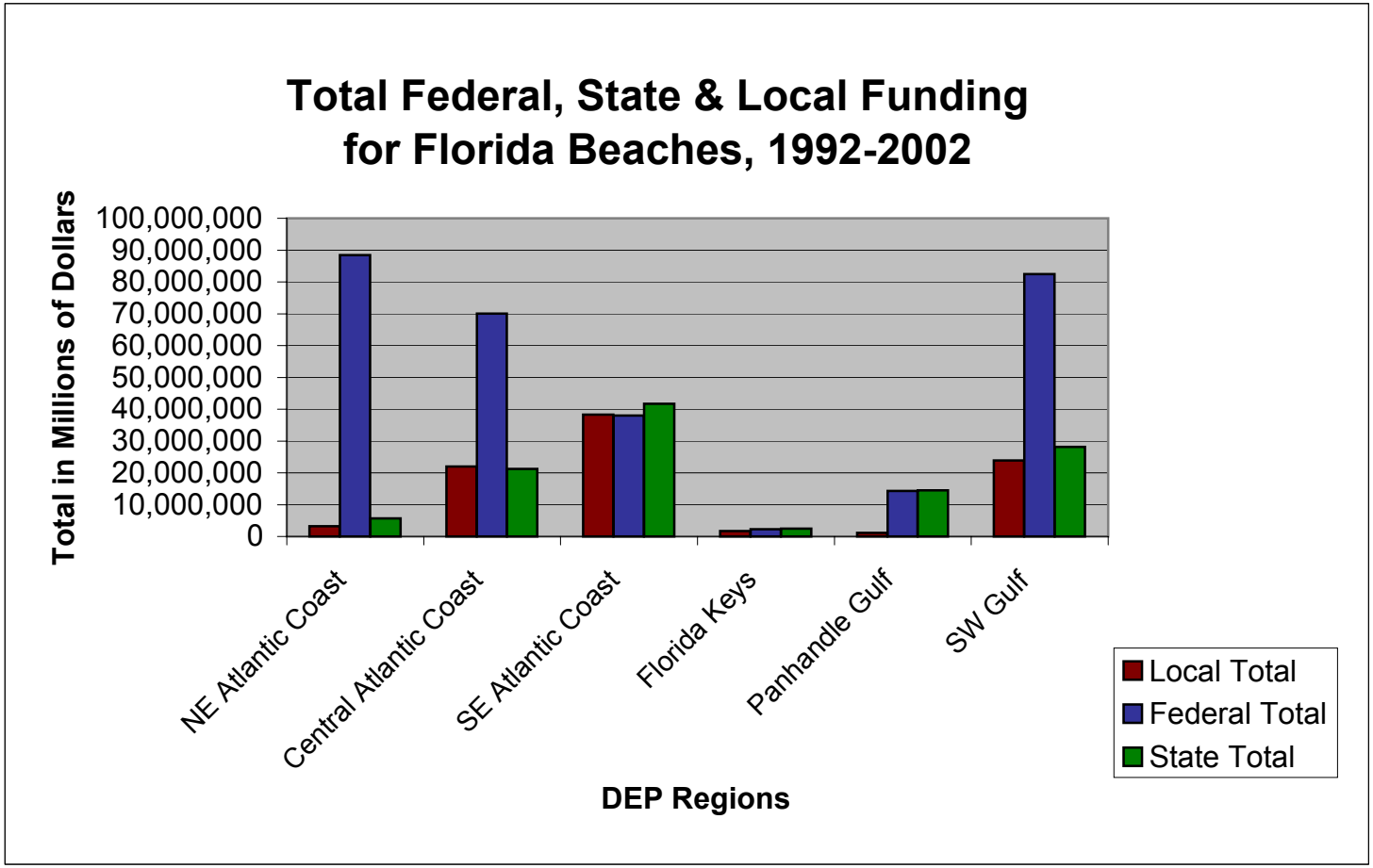

Federal Funding for Florida Beaches
1992-2002
Total in Millions of Dollars
100,000,000
90,000,000
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
NE Atlantic Coast
Central Atlantic Coast
SE Atlantic Coast
Florida Keys
Panhandle Gulf
SW Gulf
DEP Regions


Federal Funding for Florida Beaches
1992-2002
Total in Millions of Dollars
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Yearly Funding
Federal

Without COE Maintenance Dredging Data




Federal & State Total Funding for Florida Beaches, 1992-2002
Total in Millions of Dollars
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
NE Atlantic Coast
Central Atlantic Coast
SE Atlantic Coast
Florida Keys
Panhandle Gulf
SW Gulf
DEP Regions


Total Federal, State & Local Funding
for Florida Beaches, 1992-2002
Total in Millions of Dollars
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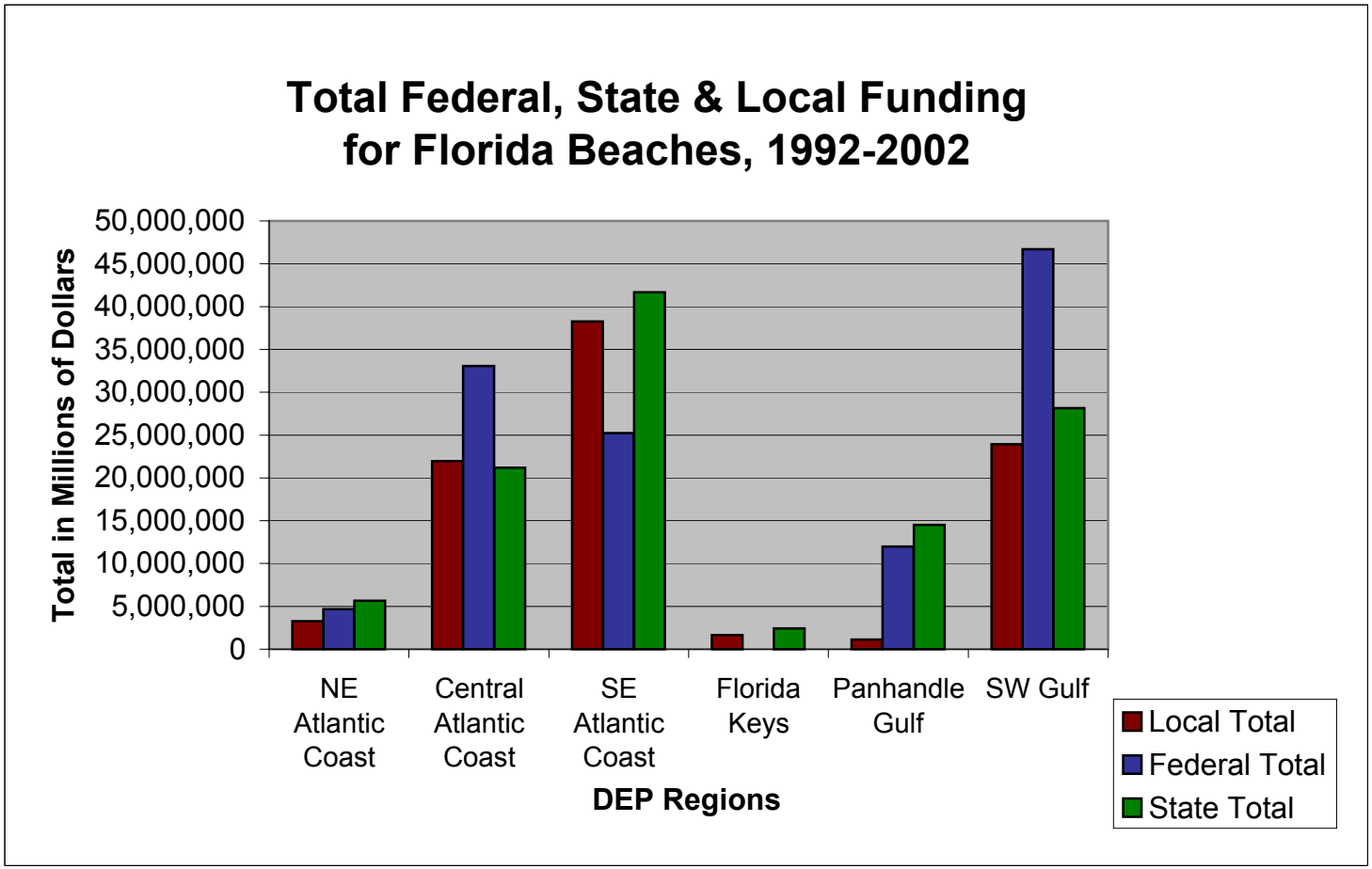
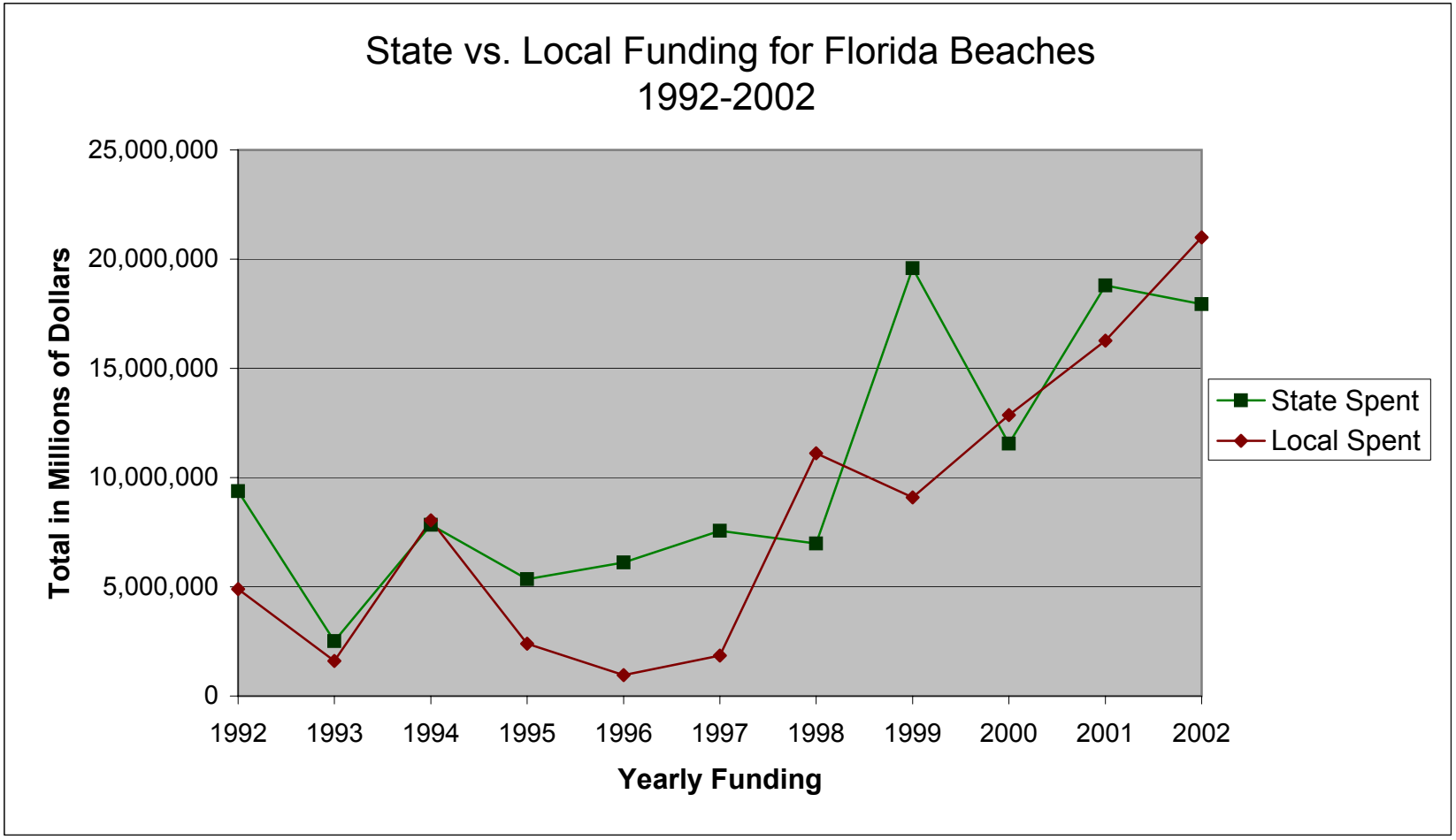
90,000,000
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
NE Atlantic Coast
Central Atlantic Coast
SE Atlantic Coast
Florida Keys
Panhandle Gulf
SW Gulf
Local Total
Federal Total
State Total
DEP Regions

Without Federal Maintenance Dredging Data




State vs. Local Funding for Florida Beaches
1992-2002
Total in Millions of Dollars
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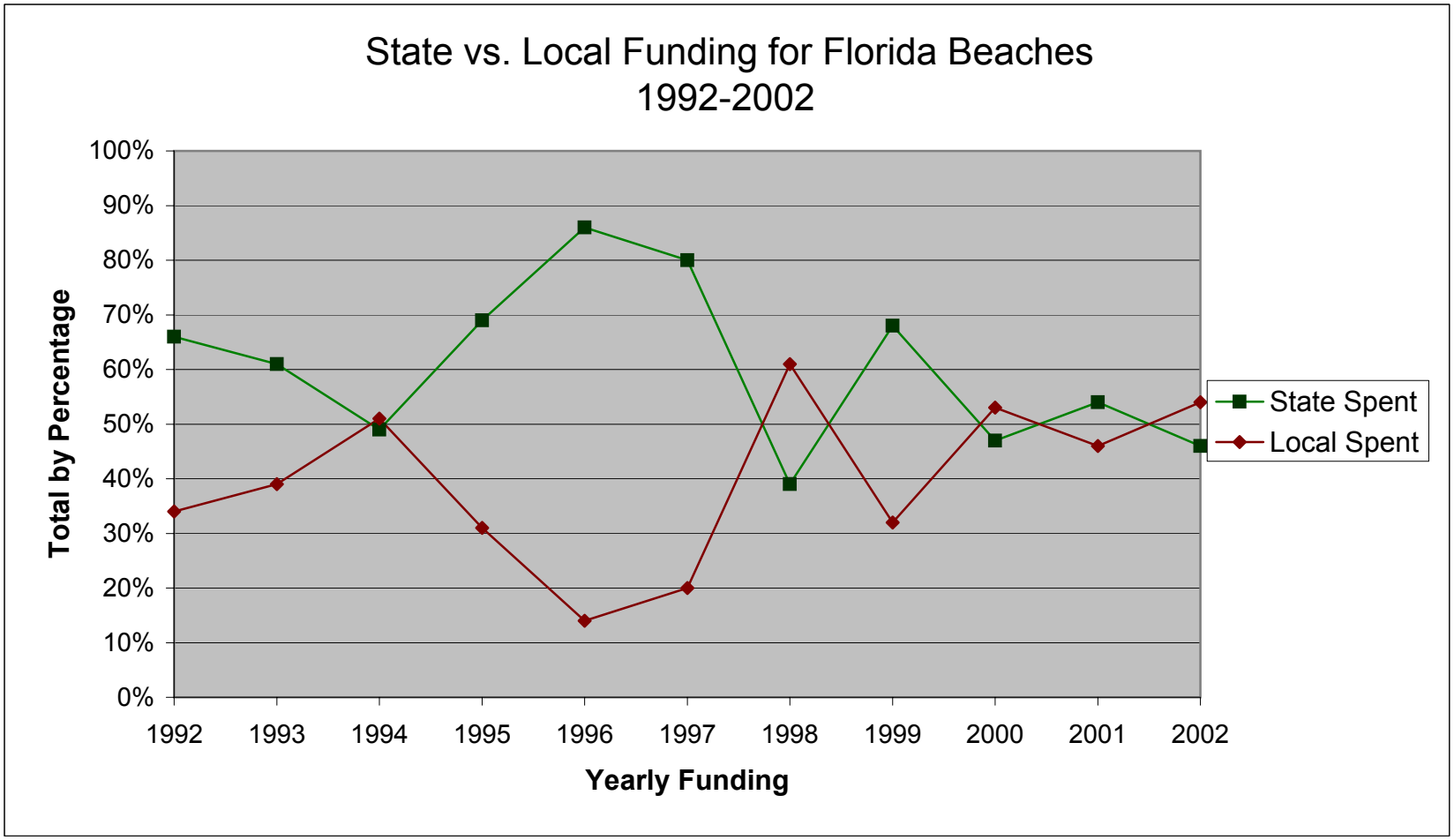
20,000,000
15,000,000
10,000,000
5,000,000
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Yearly Funding
State Spent
Local Spent


State vs. Local Funding for Florida Beaches
1992-2002
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Total by Percentage
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Yearly Funding
State Spent
Local Spent

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
NE Atlantic Coast	Anna Marie Island Beach Nourishment Project	2000	$0	$1,613,709	$0	$0
NE Atlantic Coast	Collier County Beach Nourishment	2002	$81,425	$391,792	$497,688	$497,688
NE Atlantic Coast	Collier County Beach Nourishment	2002	$108,389	$893,248	$0	$0
NE Atlantic Coast	Duval County Beach Nourishment	2000	$0	$2,797,000	$0	$0
NE Atlantic Coast	Flagler Dune Restoration	1995	$28,500	$50,000	$9,477	$9,477
NE Atlantic Coast	Ft. Clinch Shore Protection Project	1999	$0	$275,630	$0	$0
NE Atlantic Coast	Jacksonville Beach Dune Protection	2002	$53,931	$484,200	$0	$0
NE Atlantic Coast	Jacksonville Beach Nourishment	1995	$2,612,783	$3,964,500	$1,375,431	$1,375,431
NE Atlantic Coast	Nassau County Beach Restoration Project	2000	$26,275	$54,500	$26,636	$74,329
NE Atlantic Coast	Nassau County Beach Restoration Project	2001	$26,690		$27,191	$0
NE Atlantic Coast	Nassau County Beach Restoration Project	2002	$673		$673	$0
NE Atlantic Coast	Nassau County Beach Restoration Project	2002	$3,800	$150,000	$2,829	$0
NE Atlantic Coast	Nassau County Dune Protection	1992	$44,500	$50,000	$17,000	$17,000
NE Atlantic Coast	Sawpit Creek-Nassau Sound Interlocal Agree.	2002	$300,000	$300,000	$0	$0
NE Atlantic Coast	South Amelia Island Feasibility Study	2000	$0	$5,000	$0	$0
NE Atlantic Coast	St. Johns County Beach Restoration	2001	$593,607	$2,590,599	$593,607	$593,607
NE Atlantic Coast	St. Johns County Shore Protection	2000	$0	$44,690	$0	$0
		TOTAL	$3,880,573	$13,664,868	$2,550,532	$2,567,532

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
SE Atlantic Coast	Boca Raton Beach Nourishment	1999	$1,005,500	$1,005,500	$335,028	$1,147,745
SE Atlantic Coast	Boca Raton Beach Nourishment	2002	$711,982	$764,819	$671,210	$0
SE Atlantic Coast	Boca Raton Beach Nourishment	2002	$186,627	$752,247	$141,507	
SE Atlantic Coast	Boca Raton Sand Transfer	1992	$92,500	$132,400	$34,303	$41,676
SE Atlantic Coast	Boca Raton Sand Transfer	1993	$40,000		$7,373	$0
SE Atlantic Coast	Broward County Shore Protection Project	1999	$0	$313,293	$0	$0
SE Atlantic Coast	Broward County Shore Protection Project	2000	$83,215	$83,215	$269,345	$2,253,647
SE Atlantic Coast	Broward County Shore Protection Project	2001	$195,958	$4,998,710	$172,830	$0
SE Atlantic Coast	Broward County Shore Protection Project	2002	$219,606		$1,811,472	$0
SE Atlantic Coast	Coral Cove Shore Protection	1994	$204,529		$68,176	$99,752
SE Atlantic Coast	Coral Cove Shore Protection	1995	$22,648		$7,550	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1996	$32,072	$309,485	$10,691	$148,071
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1997	$60,798		$21,136	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1998	$152,005		$50,669	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1998	$13,163	$132,121	$4,388	$0

SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1999	$25,073		$8,358	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1999	$7,869		$2,623	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	2000	$39,531		$13,177	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	2000	$111,087		$37,029	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2000	$668,275	$1,205,511	$2,315,732	$8,579,812
SE Atlantic Coast	Dade County Beach Erosion Control	2000	$1,621,192	$10,508,550	$842,540	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2001	$537,235		$537,235	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2001	$3,142,996		$3,301,593	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2001	$157,889	$171,889	$31,889	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2002	$1,323,212		$1,372,657	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2002	$31,509		$178,166	$0
SE Atlantic Coast	Deerfield Beach Restoration	2000	$736,500	$1,431,500	$2,124,758	$2,193,449
SE Atlantic Coast	Deerfield Beach Restoration	2001	$40,451		$0	$0
SE Atlantic Coast	Deerfield Beach Restoration	2002	$13,665		$68,691	$0
SE Atlantic Coast	Delray Beach Nourishment	1992	$343,348	$2,007,236	$64,115	$1,333,039
SE Atlantic Coast	Delray Beach Nourishment	1993	$1,126,449		$1,168,189	$0
SE Atlantic Coast	Delray Beach Nourishment	1995	$25,941		$14,849	$0
SE Atlantic Coast	Delray Beach Nourishment	1996	$24,627		$14,097	$0
SE Atlantic Coast	Delray Beach Nourishment	1998	$52,007		$29,769	$0
SE Atlantic Coast	Delray Beach Nourishment	2000	$73,045		$42,020	$0
SE Atlantic Coast	Delray Beach Nourishment	2001	$67,038	$67,039	$57,472	$57,472
SE Atlantic Coast	Delray Beach Nourishment	2001	$59,417	$1,306,235	$2,315	$2,315
SE Atlantic Coast	Ft. Pierce Beach Restoration	1999	$2,073,091	$3,930,750	$2,073,091	$2,267,933
SE Atlantic Coast	Ft. Pierce Beach Restoration	2000	$108,535		$108,535	$0
SE Atlantic Coast	Ft. Pierce Beach Restoration	2000	$0	$115,880	$0	$0
SE Atlantic Coast	Ft. Pierce Beach Restoration	2002	$86,307		$86,307	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1992	$3,506,315	$4,800,000	$1,318,838	$1,570,890
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1993	$139,653		$46,401	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1994	$94,501		$31,500	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1996	$176,287		$0	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1998	$382,500		$136,651	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1999	$112,500		$37,500	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	2001	$94,624		$0	$0
SE Atlantic Coast	Hutchinson Island Bch Nourishment	2001	$632,050	$632,050	$758,275	$0
SE Atlantic Coast	Hutchinson Island Bch Nourishment	2001	$109,457	$1,731,320	$132,054	$0
SE Atlantic Coast	Hutchinson Island Bch Nourishment	2002	$1,305,256		$1,567,227	$2,457,556
SE Atlantic Coast	Juno Beach	1996	$74,850		$0	$0

SE Atlantic Coast	Juno Beach	1996	$84,900		$0	$0
SE Atlantic Coast	Juno Beach Restoration Project	2002	$1,924,007	$1,999,920	$1,999,920	$5,544,606
SE Atlantic Coast	Juno Beach Restoration Project	2002	$3,190,217	$3,583,139	$3,544,686	$0
SE Atlantic Coast	Juno Beach Restoration Project	2002	$0	$799,193	$0	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1992	$6,292	$872,437	$2,118	$335,810
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1993	$24,996		$0	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1994	$179,710		$8,416	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1995	$589,629		$63,508	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1995	$126,000	$126,000	$238,540	$0
SE Atlantic Coast	Jupiter Island Beach Nourishment	1999	$0	$132,922	$687,078	$2,965,000
SE Atlantic Coast	Jupiter Island Beach Nourishment	2002	$0	$1,504,856	$2,277,922	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2000	$150,794	$340,501	$167,965	$673,850
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2000	$5,224	$90,600	$5,224	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2001	$12,229		$37,249	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2002	$158,946		$158,946	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2002	$84,794		$84,794	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2002	$219,672	$487,112	$219,672	$0
SE Atlantic Coast	Key Biscayne Beach Nourishment	2000	$152,312	$1,189,218	$169,235	$394,481
SE Atlantic Coast	Key Biscayne Beach Nourishment	2000	$0	$70,000	$0	$0
SE Atlantic Coast	Key Biscayne Beach Nourishment	2001	$172,849		$192,054	$0
SE Atlantic Coast	Key Biscayne Beach Nourishment	2002	$100,687		$33,192	$0
SE Atlantic Coast	Key Biscayne Dune Restoration	1997	$55,200	$70,000	$23,657	$23,657
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1995	$73,000	$421,500	$44,416	$247,250
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1996	$113,066		$66,632	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1996	$3,152,207	$3,604,589	$0	$420,063
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1997	$110,615		$66,017	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1998	$106,637		$63,643	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2000	$10,913		$6,542	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2000	$100,548		$0	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2001	$351,834		$89,144	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2001	$461,861	$461,861	$229,560	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2001	$99,516	$419,945	$64,841	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2002	$30,629		$36,518	$0
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1996	$80,783	$1,875,000	$36,500	$599,831
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1998	$0	$150,000	$48,549	$0
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1999	$1,424,915		$485,277	$0
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1999	$0	$98,400	$29,505	$0

SE Atlantic Coast	Palm Beach Island Beach Restoration	2000	$0	$673,454	$0	$0
SE Atlantic Coast	Palm Beach Island Beach Restoration	2001	$0	$5,685,728	$0	$0
SE Atlantic Coast	Sand Key Dune Restoration	1992	$67,500	$600,000	$22,402	$393,992
SE Atlantic Coast	Sand Key Dune Restoration	1993	$54,500		$18,116	$0
SE Atlantic Coast	Sand Key Dune Restoration	1994	$75,600		$25,564	$0
SE Atlantic Coast	Sand Key Dune Restoration	1995	$6,200		$2,055	$0
SE Atlantic Coast	Sand Key Dune Restoration	1996	$396,700		$95,870	$0
SE Atlantic Coast	Sand Key Dune Restoration	1996	$62,500	$187,500	$166,088	$0
SE Atlantic Coast	Sand Key Dune Restoration	1997	$56,000		$18,652	$0
SE Atlantic Coast	Sand Key Dune Restoration	2000	$69,000		$45,325	$0
SE Atlantic Coast	Singer Island Shore Protection Project	2001	$0	$130,000	$0	$0
SE Atlantic Coast	So. Palm Beach Res. Env. Assessment	1996	$56,250		$23,535	$23,535
		TOTAL	$36,344,117	$61,973,625	$33,728,258	$33,775,432

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
SW Gulf	Bowman Beach Dunes Restoration	1992	$50,000	$50,000	$101,000	$101,000
SW Gulf	Captiva Island Nourishment	1992	$144,957		$134,147	$11,841,763
SW Gulf	Captiva Island Nourishment	1993	$104,825		$90,365	$0
SW Gulf	Captiva Island Nourishment	1998	$229,064		$0	$0
SW Gulf	Captiva Island Nourishment	1998	$2,632,377	$2,669,817	$5,274,272	$0
SW Gulf	Captiva Island Nourishment	2000	$37,440		$187,418	$0
SW Gulf	Captiva Island Shore Protection	1999	$0	$43,820	$0	$0
SW Gulf	Captiva Island Shore Protection	2000	$0	$7,990	$0	$0
SW Gulf	Captiva Island Shore Protection	2001	$0	$542,173	$0	$0
SW Gulf	Collier Co Dune Protection Project	1993	$39,851	$71,532	$15,103	$20,450
SW Gulf	Collier Co Dune Protection Project	1994	$21,500		$5,347	$0
SW Gulf	Egmont Key Shore Protection	2001	$34,000	$34,000	$0	$0
SW Gulf	Englewood Dune Protection	1992	$63,000	$63,000	$0	$0
SW Gulf	Honeymoon Island Beach Restoration	2002	$80,758	$1,537,500	$26,919	$26,919
SW Gulf	Indian Shores Beach Restoration	1992	$4,173,513	$4,173,513	$2,976,487	$3,078,627
SW Gulf	Indian Shores Beach Restoration	1993	$237,797	$1,188,987	$20,428	$0
SW Gulf	Indian Shores Beach Restoration	1994	$237,797		$20,428	$0
SW Gulf	Indian Shores Beach Restoration	1995	$237,797		$20,428	$0
SW Gulf	Indian Shores Beach Restoration	1996	$237,797		$20,428	$0
SW Gulf	Indian Shores Beach Restoration	1997	$237,797		$20,428	$0
SW Gulf	Indian Shores Beach Restoration	1997	$5,153,114	$5,359,685	$0	$0
SW Gulf	Indian Shores Beach Restoration	1998	$0	$449,378	$0	$0

SW Gulf	Indian Shores Beach Restoration	1999	$0	$513,541	$0	$0
SW Gulf	Lee County Shore Protection Project	2001	$27,335	$27,474	$35,109	$797,436
SW Gulf	Lee County Shore Protection Project	2001	$322,312	$712,967	$401,328	$0
SW Gulf	Lee County Shore Protection Project	2001	$122,275	$122,274	$149,446	$0
SW Gulf	Lee County Shore Protection Project	2001	$0	$8,179,220	$0	$0
SW Gulf	Lee County Shore Protection Project	2002	$177,199		$211,553	$0
SW Gulf	Lido Key Beach Restoration	1999	$713,064	$863,625	$2,126,559	$2,608,700
SW Gulf	Lido Key Beach Restoration	2000	$44,749		$80,771	$0
SW Gulf	Lido Key Beach Restoration	2001	$105,812		$201,822	$0
SW Gulf	Lido Key Beach Restoration	2001	$77,602	$77,602	$199,548	$0
SW Gulf	Lido Key Dune Protection Project	1993	$50,000	$50,000	$0	$0
SW Gulf	Lido Key Nourishment	2001	$704,107	$2,490,350	$782,342	$1,976,733
SW Gulf	Lido Key Nourishment	2002	$1,074,952		$1,194,391	$0
SW Gulf	Longboat Key Beach Nourishment	1994	$1,975,000	$2,864,160	$7,353,016	$7,786,261
SW Gulf	Longboat Key Beach Nourishment	1995	$257,585		$102,374	$0
SW Gulf	Longboat Key Beach Nourishment	1996	$513,150		$122,059	$0
SW Gulf	Longboat Key Beach Nourishment	1998	$651,817	$651,817	$0	$0
SW Gulf	Longboat Key Beach Nourishment	1999	$87,760		$91,328	$0
SW Gulf	Longboat Key Beach Nourishment	2000	$30,294		$117,484	$0
SW Gulf	Longboat Key Beach Nourishment	2000	$0	$75,000	$0	$0
SW Gulf	Longboat Key Beach Nourishment	2001	$0	$155,224	$0	$0
SW Gulf	North Treasure Island Beach Nourishment & Terminal Groin	2001	$521,650	$521,650	$0	$0
SW Gulf	Treasure Island (Sunset Beach) Nourishment	1999	$0	$386,873	$0	$0
SW Gulf	Venice Beach Restoration	1992	$61,181	$1,745,192	$20,393	$694,606
SW Gulf	Venice Beach Restoration	1993	$172,077		$57,359	$0
SW Gulf	Venice Beach Restoration	1994	$1,511,933		$47,545	$0
SW Gulf	Venice Beach Restoration	1994	$850,000	$850,000	$0	$0
SW Gulf	Venice Beach Restoration	1997	$163,651	$200,000	$56,212	$0
SW Gulf	Venice Beach Restoration	1999	$36,347		$29,232	$0
SW Gulf	Venice Beach Restoration	1999	$224,344	$357,626	$234,789	$0
SW Gulf	Venice Beach Restoration	2000	$133,281		$249,076	$0
SW Gulf	Venice Beach Restoration Project	2001	$0	$118,951	$0	$0
SW Gulf	Venice Beach Restoration Project	2002	$23,822	$131,792	$0	$0
		TOTAL	$24,586,683	$37,286,733	$22,776,934	$28,932,495

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
Central Atlantic Coast	Brevard Co. Shore Protection Proj.	2000	$63,566	$4,850,000	$63,588	$7,591,922
Central Atlantic Coast	Brevard Co. Shore Protection Proj.	2001	$4,524,321		$4,524,313	$0
Central Atlantic Coast	Brevard Co. Shore Protection Proj.	2002	$262,123		$162,219	$0
Central Atlantic Coast	Brevard Co. Shore Protection Proj.	2002	$337,439	$295,000	$295,000	$0
Central Atlantic Coast	Brevard Co. Shore Protection Proj.	2002	$2,546,801	$3,656,000	$2,546,802	$0
		TOTAL	$7,734,250	$8,801,000	$7,591,922	$7,591,922

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	1997	$636,942	$12,582,000	$12,909	$390,525
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	1998	$296,995		$184,660	$0
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	1999	$10,654,220		$192,956	$0
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	2000	$843,819		$0	$0
Panhandle Gulf	Panhandle Sand Search	2002	$203,974	$600,000		
Panhandle Gulf	Bonita Beach Nourishment Project	2001	$0	$833,724	$0	$0
Panhandle Gulf	Bonita Beach Nourishment Project	2002	$0	$35,000	$0	$0
		TOTAL	$12,635,950	$14,050,724	$390,525	$390,525

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
Florida Keys	Smathers Beach Nourishment	2000	$341,035	$1,173,600	$378,928	$1,173,544
Florida Keys	Smathers Beach Nourishment	2001	$727,434		$794,616	$0
Florida Keys	Smathers Beach Nourishment	2001	$61,824		$61,824	$227,688
Florida Keys	Smathers Beach Nourishment	2002	$156,872	$460,254	$165,864	$0
		TOTAL	$1,287,165	$1,633,854	$1,401,232	$1,401,232

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
MISC Statewide	North County Shore Protection (Ambersand Beach)	2001	$100,000	$100,000	$87,948	$508,766
MISC Statewide	North County Shore Protection (Ambersand Beach)	2001	$206,100	$205,593	$179,671	$0
MISC Statewide	North County Shore Protection (Ambersand Beach)	2001	$27,000	$229,400	$24,109	$0
MISC Statewide	North County Shore Protection (Ambersand Beach)	2002	$31,422	$638,215	$217,038	$0
MISC Statewide	Regional Sediment Management (USACE)	2000	$25,000		$0	$0
MISC Statewide	Rest Park Improvements	1999	$150,000	$150,000	$0	$0
				$118,951		
		TOTAL	$539,522	$1,442,159	$508,766	$508,766

DEP Inlet Activities

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1995	$273,750	$545,468	$91,250	$410,902
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1996	$33,241		$39,091	$0
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1997	$70,000		$23,334	$0
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1999	$123,367		$123,672	$0
NE Atlantic Coast	Ponce DeLeon IMP Implementation	2000	$0		$0	$0
NE Atlantic Coast	Ponce DeLeon IMP Implementation	2001	$22,555		$133,555	$0
NE Atlantic Coast	Ponce DeLeon IMP Implementation	2001	$22,555		$0	$0
NE Atlantic Coast	Ponce DeLeon Inlet Mgmt Plan	1993	$58,946	$90,607	$19,648	$30,182
NE Atlantic Coast	Ponce DeLeon Inlet Mgmt Plan	1994	$31,661		$10,534	$0
		TOTAL	$636,075	$636,075	$441,084	$441,084

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
SE Atlantic Coast	Bakers Haulover Inlet Management	1999	$200,000	$200,000	$400,000	$400,000
SE Atlantic Coast	Boca Raton IMP Implementation	1998	$927,906	$1,033,795	$309,302	$521,080
SE Atlantic Coast	Boca Raton IMP Implementation	2001	$105,889		$105,889	$0
	Boca Raton IMP Implementation	2002	$0	$0	$105,889	$0
SE Atlantic Coast	Boca Raton Inlet Bypass Engineering & Design	1998	$127,500	$127,500	$0	$0
SE Atlantic Coast	Haulover Inlet IMP	1993	$14,344	$110,815	$4,781	$36,937
SE Atlantic Coast	Haulover Inlet IMP	1994	$40,694		$13,564	$0
SE Atlantic Coast	Haulover Inlet IMP	1996	$55,777		$18,592	$0
SE Atlantic Coast	Jupiter IMP Implementation	1998	$70,334	$1,055,431	$70,334	$1,538,991
SE Atlantic Coast	Jupiter IMP Implementation	2000	$136,273		$136,273	$0
SE Atlantic Coast	Jupiter IMP Implementation	2000	$621,897		$1,030,177	$0
SE Atlantic Coast	Jupiter IMP Implementation	2001	$226,927		$302,207	$0
SE Atlantic Coast	Lake Worth IM Study	1996	$82,279	$99,999	$27,426	$33,338
SE Atlantic Coast	Lake Worth IM Study	1998	$11,629		$3,882	$0
SE Atlantic Coast	Lake Worth IM Study	1999	$6,091		$2,030	$0
SE Atlantic Coast	Lake Worth IMP Implementation	1998	$233,084	$721,957	$454,478	$949,666
SE Atlantic Coast	Lake Worth IMP Implementation	1999	$71,864		$79,870	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2000	$194,418		$194,418	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2000	$222,590		$220,900	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2001	$359,841	$481,630	$160,987	$437,643
SE Atlantic Coast	Lake Worth IMP Implementation	2002	$121,789		$276,656	$0
SE Atlantic Coast	Port Everglades Inlet Mgmt. Study	1993	$18,122	$78,762	$6,037	$72,849
SE Atlantic Coast	Port Everglades Inlet Mgmt. Study	1996	$60,640		$66,812	$0
SE Atlantic Coast	So. Lake Worth Inlet Mgmt Plan Study	1997	$90,880	$90,880	$90,880	$90,880
SE Atlantic Coast	South Lake Worth IMP Implementation	2001	$0		$0	$202,941
SE Atlantic Coast	South Lake Worth IMP Implementation	2002	$202,941	$328,079	$202,941	$0
		TOTAL	$4,203,709	$4,328,848	$4,284,325	$4,284,325

DEP Inlet Activities

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
SW Gulf	Big Sarasota/New Pass Inlet Mgmt Plan	1993	$94,245	$234,872	$31,415	$78,624
SW Gulf	Big Sarasota/New Pass Inlet Mgmt Plan	1994	$140,627		$47,209	$0
SW Gulf	Doctor Pass Inlet Management Plan	1993	$15,604	$259,102	$15,604	$219,349
SW Gulf	Doctor Pass Inlet Management Plan	1994	$15,090		$15,090	$0
SW Gulf	Doctor Pass Inlet Management Plan	1995	$14,250		$14,250	$0
SW Gulf	Doctor Pass Inlet Management Plan	1997	$214,158		$174,405	$0
SW Gulf	Gordon Pass Inlet Mgmt Plan	1995	$18,455	$88,999	$18,455	$83,796
SW Gulf	Gordon Pass Inlet Mgmt Plan	1997	$28,882		$28,883	$0
SW Gulf	Gordon Pass Inlet Mgmt Plan	1999	$41,662		$36,458	$0
SW Gulf	Hillsboro Inet Management Study	1998	$56,575	$56,575	$57,233	$57,233
SW Gulf	Hillsboro Inlet Management Plan Implementaion	2002	$37,953	$37,953	$51,348	$51,348
SW Gulf	Hillsboro Inlet Management Study	1993	$93,500	$93,500	$31,103	$31,103
SW Gulf	Hurricane Pass/Willy's Cut IMP	1996	$39,257	$39,257	$13,085	$13,085
SW Gulf	John's Pass Inlet	1994	$59,000	$59,000	$19,682	$19,682
SW Gulf	Longboat Pass Inlet Management Plan Study	1992	$72,900	$95,998	$24,300	$32,000
SW Gulf	Longboat Pass Inlet Management Plan Study	1993	$5,024		$1,675	$0
SW Gulf	Longboat Pass Inlet Management Plan Study	1994	$18,074		$6,025	$0
SW Gulf	St. Mary's IMP	1995	$74,801	$172,493	$24,935	$119,829
SW Gulf	St. Mary's IMP	1996	$53,481		$19,775	$0
SW Gulf	St. Mary's IMP	1997	$41,152		$74,099	$0
SW Gulf	St. Mary's IMP	1998	$3,059		$1,020	$0
SW Gulf	St. Mary's Inlet Sand Transfer	1994	$400,000	$1,042,000	$0	$0
SW Gulf	St. Mary's Inlet Sand Transfer	1994	$642,000		$0	$0
SW Gulf	Stump Pass Bypass	2002	$46,036	$46,036	$0	$0
SW Gulf	Stump Pass Inlet Mgmt. Study	2000	$22,758	$38,866	$25,287	$74,231
SW Gulf	Stump Pass Inlet Mgmt. Study	2001	$16,108		$48,944	$0
SW Gulf	Venice Inlet Management Plan	1995	$108,000	$108,000	$36,000	$36,000
SW Gulf	Wiggins Pass IM Study	1994	$39,357	$66,000	$13,119	$75,822
SW Gulf	Wiggins Pass IM Study	1997	$26,643		$62,703	$0
		TOTAL	$2,438,651	$2,438,651	$892,102	$892,102

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
Central Atlantic Coast	Canaveral Inlet Sand Transfer	1995	$300,000	$300,000	$100,000	$100,000
Central Atlantic Coast	Ft. Pierce IMP Implementation	2001	$82,000	$337,000	$82,000	$337,000
Central Atlantic Coast	Ft. Pierce IMP Implementation	2001	$114,576		$114,576	$0
Central Atlantic Coast	Ft. Pierce IMP Implementation	2002	$140,424		$140,424	$0
Central Atlantic Coast	Ft. Pierce Inlet Mgmt Plan	1992	$132,278	$132,278	$0	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1993	$47,047	$927,750	$47,247	$743,976
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1994	$48,334		$20,217	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1995	$288,456		$132,267	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1996	$147,773		$60,262	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1997	$12,207		$8,737	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1997	$23,293		$251,956	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1998	$19,863		$1,898	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1998	$5,693		$2,124	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$3,268		$18,918	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$29,118		$100,375	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$154,500		$12,887	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$148,225		$68,633	$0
Central Atlantic Coast	Hutchinson Island Beach Nourishment	2001	$632,050	$2,046,763	$0	$0
Central Atlantic Coast	Hutchinson Island Beach Nourishment	2001	$109,457		$0	$0
Central Atlantic Coast	Hutchinson Island Beach Nourishment	2002	$1,305,256		$0	$0
Central Atlantic Coast	Port Canaveral Inlet Management	1996	$174,330	$1,329,474	$61,266	$892,510
Central Atlantic Coast	Port Canaveral Inlet Management	1997	$276,245		$92,094	$0
Central Atlantic Coast	Port Canaveral Inlet Management	1998	$198,990		$65,072	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2001	$112,200		$112,199	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2001	$286,500		$286,500	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2001	$143,544		$139,472	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2002	$137,665		$135,907	$0
Central Atlantic Coast	Port Canaveral Inlet Mgmt Plan	1995	$150,000	$150,000	$56,373	$56,373
Central Atlantic Coast	Sebastian Inlet IMP Implementation	1999	$413,150		$413,150	$0
Central Atlantic Coast	Sebastian Inlet IMP Implementation	2000	$337,499		$37,500	$0
Central Atlantic Coast	Sebastian Inlet IMP Implementation	2000	$37,500		$237,908	$0
Central Atlantic Coast	Sebastian Inlet IMP Implementation	2001	$350,000		$350,000	$0
	Sebastian Inlet IMP Implementation	2002	$0	$0	$331,982	$1,370,540
Central Atlantic Coast	Sebastian Inlet Physical Model	1992	$34,997	$166,309	$0	$0
Central Atlantic Coast	Sebastian Inlet Physical Model	1993	$63,812		$0	$0
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1994	$111,357	$652,250	$37,119	$5,487,273
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1994	$300,000		$274,462	$0

Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1997	$110,000		$832,061	$0
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1998	$130,893		$4,343,631	$0
Central Atlantic Coast	St. Lucie IMP Implementation	2001	$0	$0	$13,301	$13,301
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	1999	$127,907		$127,907	$0
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	1999	$1,198,750	$2,423,315	$1,198,750	$0
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	2000	$1,122,092		$1,122,092	$4,756,377
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	2000	$1,500,000		$1,367,018	$0
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	2000	$775,000		$940,610	$0
Central Atlantic Coast	St. Lucie Inlet Mgmt. Plan	1992	$84,405	$150,000	$28,135	$50,000
Central Atlantic Coast	St. Lucie Inlet Sand Transfer Dune Protection	1992	$299,656	$399,999	$100,521	$325,724
Central Atlantic Coast	St. Lucie Inlet Sand Transfer Dune Protection	1999	$22,434		$7,479	$0
Central Atlantic Coast	St. Lucie Inlet Sand Transfer Dune Protection	2000	$78,000		$217,724	$0
		TOTAL	$12,320,744	$9,015,138	$14,092,754	$14,133,074

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
Panhandle Gulf	St. Andrews Bay Entrance Feasibility	2000	$125,138	$125,138	$0	$0
Panhandle Gulf	St. Andrews Inlet Mgmt Study	1999	$50,000	$50,000	$0	$0
Panhandle Gulf	St. Augustine IMP	1994	$4,995	$144,298	$1,110	$77,217
Panhandle Gulf	St. Augustine IMP	1995	$17,023		$5,489	$0
Panhandle Gulf	St. Augustine IMP	1996	$67,745		$22,581	$0
Panhandle Gulf	St. Augustine IMP	1997	$21,651		$37,075	$0
Panhandle Gulf	St. Augustine IMP	1998	$32,884		$10,962	$0
Panhandle Gulf	St. Augustine Inlet/Salt Run Sand	2001	$180,000	$295,000	$32,000	$634,306
Panhandle Gulf	St. Augustine Inlet/Salt Run Sand	2001	$115,000		$314,306	$0
Panhandle Gulf	St. Augusting Inlet Sand Transfer	1996	$129,036	$129,036	$43,104	$43,104
		TOTAL	$743,472	$743,472	$466,627	$754,627

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
MISC Statewide	Big Hickory Pass/New Pass Management Plan	1997	$68,370	$68,370	$22,790	$22,790
MISC Statewide	East Pass Management Study	1998	$9,562	$146,637	$0	$0
MISC Statewide	East Pass Management Study	1999	$97,608		$0	$0
MISC Statewide	East Pass Management Study	2000	$39,467		$0	$0
MISC Statewide	Ft. George Inlet Port Erosion	2000	$0	$0		
MISC Statewide	Redfish/Blind Pass Mgmt Plan	1992	$173,639	$173,639	$57,750	$57,750
		TOTAL	$388,646	$388,646	$80,540	$80,540

DEP Post Storm

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
MISC Statewide	(Task 4) Post Storm	1999	$27,000	$27,000	$0	$0
MISC Statewide	Beach Access Study DEP U of F	1993	$9,889	$100,429	$0	$0
MISC Statewide	Beach Access Study DEP U of F	1994	$90,540		$0	$0
MISC Statewide	Beach Access Study DEP/DCA	1994	$138,615	$138,615	$0	$0
MISC Statewide	Post Storm Redevelopment Study	1994	$153,500	$153,500	$0	$0
MISC Statewide	Post Storm Redevlopment - Phase II	1994	$108,000	$133,000	$0	$0
MISC Statewide	Post Storm Study	1994	$173,763	$173,763	$0	$0
MISC Statewide	Post Storm Redevlopment - Phase II	1995	$25,000		$0	$0
MISC Statewide	Post Storm Redevelop Phase III	1996	$127,000	$127,000	$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1997	$24,499		$0	$0
MISC Statewide	Development of a Post-Storm Foundation	1998	$31,807	$39,921	$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1998	$84,899	$210,245	$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1998	$4,507		$0	$0
MISC Statewide	OK/Strategic Management Plan	1998	$311,344	$520,025	$0	$0
MISC Statewide	Destin Post Opal Restoration	1999	$118,800	$118,800	$52,200	$52,200
MISC Statewide	Development of a Post-Storm Foundation	1999	$8,114		$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1999	$30,342		$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1999	$8,016		$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	2000	$47,982		$698	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	2000	$10,000		$0	$0
MISC Statewide	Destin Hurricane Opal	2001	$84,905	$205,106	$0	$0
MISC Statewide	ES/Impl. Post-Opal Recovery	2001	$28,109	$28,109	$0	$0
MISC Statewide	Franklin Co. - Hurr. Opal, George, & Earl	2001	$50,469	$79,999	$50,469	$79,896
MISC Statewide	OK/Strategic Management Plan	2001	$195,737		$344,444	$428,262
MISC Statewide	Santa Rosa County - Hurricane Opal	2001	$146,639	$146,639	$0	$0
MISC Statewide	South County Post-Storm Beach Condition Study	2001	$0			
MISC Statewide	Walton County Hurricane Opal	2001	$137,181		$0	$0
MISC Statewide	Walton County Post-Opal Restoration	2001	$277,826	$277,826	$0	$0
MISC Statewide	Destin Hurricane Opal	2002	$120,201		$0	$0
MISC Statewide	Franklin Co. - Hurr. Opal, George, & Earl	2002	$29,530		$29,427	$0
MISC Statewide	Lovers Key Emergency Berm Installation	2002	$4,573	$4,573	$0	$0
MISC Statewide	OK/Strategic Management Plan	2002	$12,944		$83,818	$0
MISC Statewide	St. Lucie Post-Storm Study	2002	$22,561	$22,561	$67,282	$67,282
MISC Statewide	Walton County Hurricane Opal	2002	$178,115	$315,296	$0	$0
MISC Statewide	Walton County Hurricane Opal	2002	$59,651		$0	$0
		TOTAL	$2,882,058	$2,822,407	$628,338	$627,640

DEP Post Storm

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
NE Atlantic Coast	South Amelia Island MOA	2001	$4,957	$4,957	$0	$0
		TOTAL	$4,957	$4,957	$0	$0

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded Total
MISC Statewide	Aerial Photography Services	2002	44490	$44,490.00	$0	$0
MISC Statewide	Alligator Point Feasibility Study	2001	$50,469	$89,785	$0	$0
MISC Statewide	Alligator Point Feasibility Study	2002	$29,427		$0	$0
MISC Statewide	Beach Access Study DEP U of F	1993	$9,889	$100,429	$0	$0
MISC Statewide	Beach Access Study DEP U of F	1994	$90,540		$0	$0
MISC Statewide	Beach Management Workshop Series (FSU)	2000	$63,725	$63,725	$0	$0
MISC Statewide	Central Miami Bch Erosion Hotspot	2001	$250,000	$250,000	$0	$0
MISC Statewide	Central Miami Beach Erosion Hotspot Control Project	2000	$250,000	$250,000	$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1996	$32,072	$441,598	$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1997	$60,798		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1998	$152,005		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1998	$13,163		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1999	$25,073		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1999	$7,869		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	2000	$39,531		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	2000	$111,087		$0	$0
MISC Statewide	Derelict Vessel - Watson Bayou	2000	$150,000	$150,000	$12,500	$12,500
MISC Statewide	Design Guidelines (UF)	2000	$15,000	$15,000	$0	$0
MISC Statewide	Dev of Research Plan	2001	$30,000	$30,000	$0	$0
MISC Statewide	Eglin Experimental Groins	2001	$209,087	$300,780	$0	$0
MISC Statewide	Eglin Experimental Groins	2002	$91,693		$0	$0
MISC Statewide	Ft. Clinch Amelia Island MOA	2002	$5,000	$5,000	$0	$0
MISC Statewide	Honeymoon Isl.C'way Feasibility	2000	$27,368	$49,760	$6,842	$12,440
MISC Statewide	Honeymoon Isl.C'way Feasibility	2001	$22,392		$5,598	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1993	$49,726	$496,249	$16,575	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1994	$85,385		$28,428	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1995	$105,782		$35,260	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1996	$99,853		$29,415	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1997	$16,676		$5,765	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1999	$102,026		$123,008	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	2000	$36,801		$60,123	$298,574
MISC Statewide	Panhandle Sand Search	2002	$313,805	$313,805	$0	$0
MISC Statewide	Regional Sediment Management (USACE)	2000	$25,000	$25,000	$0	$0
MISC Statewide	Sea Turtle Study	1992	27480	$49,998	$0	$0
MISC Statewide	Sebastian Turbidity Monitoring	1993	43750	$43,750	$14,434	$14,434
MISC Statewide	Study of Alt. Beach Materials	2000	55075	$87,488	$0	$0
MISC Statewide	Study of Alt. Beach Materials	2001	32413		$0	$0
MISC Statewide	Stump Pass Evacuation Study	1998	38500	$132,000	$0	$0
MISC Statewide	Stump Pass Evacuation Study	1999	61000		$0	$0
MISC Statewide	Stump Pass Evacuation Study	2000	32500		$0	$0
MISC Statewide	UF Des. Watercraft Hydro surveying	2001	73064	$73,064	$0	$0
		TOTAL	$2,979,514	$3,011,921	$337,948	$337,948

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
NE Atlantic Coast	Duval Co Shore Protection	1996	5.00	$7,590,000	$4,675,440	$2,914,560
		TOTAL	5.00	$7,590,000	$4,675,440	$2,914,560

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Boca Raton	1998	1.45	$2,144,100.00	$1,087,701.00	$1,056,398.00
SE Atlantic Coast	Palm Beach Co.-Delray Beach	1992	1.95	$3,993,528.00	$2,249,554.00	$1,743,973.00
SE Atlantic Coast	Dade Co.-Gov't Cut to Haulover Beach	1997	1.02	$4,371,301.00	$2,294,933.00	$2,076,367.00
SE Atlantic Coast	Dade Co.-Gov't Cut to Haulover Beach	1999	1.32	$8,315,837.00	$4,141,062.00	$4,174,550.00
SE Atlantic Coast	Dade co.-Sunny Isles Segment	1997	0.00	$4,371,301.00	$2,235,920.00	$2,135,386.00
SE Atlantic Coast	Dade co.-Sunny Isles Segment	2001	2.90	$18,212,000.00	$9,315,438.00	$8,896,562.00
		TOTAL	8.64	$41,408,067.00	$21,324,608.00	$20,083,236.00

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
SW Gulf	Lee Co.-Captiva Island	1996	4.70	$5,164,900.00	$1,431,710.00	$3,733,189.00
SW Gulf	Pinellas Co.-Long Key	1996	0.53	$2,511,000.00	$1,526,688.00	$908,982.00
SW Gulf	Pinellas Co.-Long Key	2000	0.53	$3,000,000.00	$1,824,000.00	$1,176,000.00
SW Gulf	Pinellas Co.-Sand Key	1999	7.00	$12,500,000.00	$7,400,000.00	$5,100,000.00
SW Gulf	Pinellas Co.-Treasure Island	1996	0.47	$780,000.00	$450,840.00	$329,160.00
SW Gulf	Pinellas Co.-Treasure Island	2000	2.00	$2,000,000.00	$1,156,000.00	$844,000.00
		TOTAL	15.23	$25,955,900.00	$13,789,238.00	$12,091,331.00

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
Central Atlantic Coast	Fort Pierce Beach Shore Protection Project	1999	1.30	$6,031,000.00	$2,817,683.00	$3,213,316.00
Central Atlantic Coast	Martin Co	2001	3.75	$7,935,000.00	$3,696,916.00	$4,238,083.00
		TOTAL	5.05	$13,966,000.00	$6,514,599.00	$7,451,399.00

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
FLORIDA KEYS	Monroe Co.	2000	0.08	$212,025.00		$212,025.00
		TOTAL	0.08	$212,025.00		$212,025.00

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
Central Atlantic Coast	Brevard Co. Shore Protection-North Reach	2000	9.40	$22,628,432	$14,052,256	$8,576,175
Central Atlantic Coast	Brevard Co.-Shore Protection-South Reach	2000	3.40	$15,032,000	$8,463,016	$6,568,984
Central Atlantic Coast	Martin Co. Shore Protection Project	1996	3.75	$8,625,000	$4,018,387	$4,606,612
		TOTAL	16.55	$46,285,432	$26,533,659	$19,751,771

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
Panhandle Gulf	Bay Co.-Panama City Beaches	1999	16.30	$21,200,000	$11,978,000	$9,222,000
		TOTAL	16.30	$21,200,000	$11,978,000	$9,222,000

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Jupiter/Carlin	1995	1.10	$2,274,400	$1,244,324	$1,030,075
SE Atlantic Coast	Palm Beach Co.-Ocean Ridge	1998	1.40	$4,428,068	$2,665,696	$1,762,371
SE Atlantic Coast	Monroe Co.-Key West	2000	0.47	$1,010,208		$1,010,208
		TOTAL	2.97	$7,712,676	$3,910,020	$3,802,654

Region	Project Name	Year(s)	Miles Covered	Total	Federal	Non-Federal
SW Gulf	Sarasota Co. Shore Protection Project	1996	3.20	$15,031,601	$10,905,426	$4,126,176
SW Gulf	Manatee Co. Shore Protection Project	1993	4.70	$5,912,537	$3,321,072	$2,591,464
SW Gulf	Venice Dune Restoration	1997		$310,000		$310,000
SW Gulf	Pinellas Co.-Sand Key	1993	7.90	$31,528,000	$18,664,576	$12,863,424
		TOTAL	15.80	$52,782,138	$32,891,074	$19,891,064

Region	Project Name	Year(s)	Disposal Volume	Total	Federal	Non-Federal
Central Atlantic Coast	St. Lucie Inlet	1993	148,361	$717,794	$717,794	
Central Atlantic Coast	Ft. Pierce Harbor	1994	84,660	$1,240,766	$1,240,766	
Central Atlantic Coast	Canaveral Harbor	1995	832,000	$7,645,393	$7,645,393	
Central Atlantic Coast	Ft. Pierce Harbor	1995	120,000	$1,102,701	$1,102,701	
Central Atlantic Coast	Ft. Pierce Harbor	1997	19,368	$159,637	$159,637	
Central Atlantic Coast	Ft. Pierce Harbor	1998	78,400	$754,842	$754,842	
Central Atlantic Coast	Charlotte Harbor	1999	322,000	$7,802,570	$7,802,570	
Central Atlantic Coast	St. Lucie Inlet	2000	250,000	$3,634,999	$3,634,999	
Central Atlantic Coast	St. Petersburg Harbor	2000	500,000	$7,269,999	$7,269,999	
Central Atlantic Coast	Canaveral Harbor	2001	20,000	$200,000	$200,000	
Central Atlantic Coast	Mantanzas Pass	2001	188,000	$1,880,000	$1,880,000	
Central Atlantic Coast	IWW: Matanzas Inlet	2002	226,000	$2,260,000	$2,260,000	
		TOTAL	2,788,789	$34,668,701	$34,668,701	

Region	Project Name	Year(s)	Disposal Volume	Total	Federal	Non-Federal
NE Atlantic Coast	Fernandina Harbor	1994	607,680	$8,906,079	$8,906,079	
NE Atlantic Coast	Jacksonville Harbor	1994	1,032,230	$15,128,229	$15,128,229	
NE Atlantic Coast	Fernandina Harbor	1995	254,220	$2,664,233	$2,664,233	
NE Atlantic Coast	Fernandina Harbor	1996	84,446	$870,336	$870,336	
NE Atlantic Coast	St.Augustine Harbor	1996	257,649	$2,928,956	$2,928,956	
NE Atlantic Coast	Fernandina Harbor	1997	416,028	$4,751,579	$4,751,579	
NE Atlantic Coast	Jacksonville Harbor	1998	439,000	$4,226,728	$4,226,728	
NE Atlantic Coast	Fernandina Harbor	1999	407,000	$9,862,254	$9,862,254	
NE Atlantic Coast	Jacksonville Harbor	1999	603,000	$14,611,644	$14,611,644	
NE Atlantic Coast	Ponce de Leon Inlet	2000	32,300	$469,642	$469,642	
NE Atlantic Coast	St. Mary's/Kings Beach	2001	137,000	$1,370,000	$1,370,000	
NE Atlantic Coast	AIWW, Nassau Sound	2001	262,000	$2,620,000	$2,620,000	
NE Atlantic Coast	St. Johns Co	2001	844,000	$8,440,000	$8,440,000	
NE Atlantic Coast	Fernandina/Kings Beach	2002	265,000	$2,650,000	$2,650,000	
NE Atlantic Coast	Fernandina Harbor	1992	193,336	$1,933,360	$1,933,360	
		TOTAL	5,834,889	$81,433,040	$81,433,040	

Region	Project Name	Year(s)	Disposal Volume	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Harbor	1995	179,330	$1,944,445	$1,944,445	
SE Atlantic Coast	Palm Beach Harbor	1996	150,110	$1,273,578	$1,273,578	
SE Atlantic Coast	Palm Beach Harbor	1997	19,368	$221,208	$221,208	
SE Atlantic Coast	Palm Beach Harbor	1998	78,400	$1,792,826	$1,792,826	
SE Atlantic Coast	Palm Beach Harbor	1999	52,928	$1,282,529	$1,282,529	
SE Atlantic Coast	Palm Beach Harbor	2000	132,000	$1,919,280	$1,919,280	
SE Atlantic Coast	Bakers Haulover	2000	7,500	$109,050	$109,050	
SE Atlantic Coast	Palm Beach Harbor	2001	57,000	$570,000	$570,000	
SE Atlantic Coast	Palm Beach Harbor	2002	137,000	$1,370,000	$1,370,000	
		TOTAL	813,636	$10,482,916	$10,482,916	

Region	Project Name	Year(s)	Disposal Volume	Total	Federal	Non-Federal
SW Gulf	Charlotte Harbor	1993	437,840	$2,118,339	$2,118,339	
SW Gulf	Venice Inlet	1996	1,024,000	$10,553,770	$10,553,770	
SW Gulf	Charlotte Harbor	1997	245,566	$2,214,703	$2,214,703	
SW Gulf	Longboat Pass	1997	168,042	$2,570,807	$2,570,807	
SW Gulf	New Pass	1997	313,554	$3,581,193	$3,581,193	
SW Gulf	Charlotte Harbor	1998	445,046	$4,152,224	$4,152,224	
SW Gulf	St. Petersburg Harbor	2001	612,000	$6,120,000	$6,120,000	
SW Gulf	Fort Meyers Beach	2000	120,000	$1,744,800	$1,744,800	
SW Gulf	Naples to Gordon Pass	1993	94,796	$458,638	$458,638	
		TOTAL	3,460,844	$33,514,474	$33,514,474	

Region	Project Name	Year(s)	Disposal Volume	Total	Federal	Non-Federal
MISC Statewide	IWW:Jax to Mia	1995	$257,602	$1,742,438	$1,742,438	
MISC Statewide	IWW:Jax to Mia	1998	$282,851	$1,818,043	$1,818,043	
MISC Statewide	IWW:Jax to Mia	1999	$222,000	$5,379,411	$5,379,411	
MISC Statewide	IWW:Jax to Mia	2000	$336,000	$4,885,439	$4,885,439	
		TOTAL	$1,098,453	$13,825,331	$13,825,331	

Data Summaries by Region

COE Beach Nourishment Data

Region	Total Spent	Federal	Non-Federal
NE Atlantic Coast	$7,590,000	$4,675,440	$2,914,560
Central Atlantic Coast	$13,966,000.00	$6,514,599.00	$7,451,399.00
SE Atlantic Coast	$41,408,067.00	$21,324,608.00	$20,083,236.00
Florida Keys	$212,025.00		$212,025.00
SW Gulf	$25,955,900.00	$13,789,238.00	$12,091,331.00
TOTAL	$89,131,992	$46,303,885	$42,752,551

COE Beach Restoration Data

Region	Total Spent	Federal	Non-Federal
Central Atlantic Coast	$46,285,432	$26,533,659	$19,751,771
SE Atlantic Coast	$7,712,676	$3,910,020	$3,802,654
Panhandle Gulf	$21,200,000	$11,978,000	$9,222,000
SW Gulf	$52,782,138	$32,891,074	$19,891,064
TOTAL	$127,980,246	$75,312,753	$52,667,489

COE Maintenance Dredging Data

Region	Total Spent	Federal	Non-Federal
NE Atlantic Coast	$81,433,040	$81,433,040	
Central Atlantic Coast	$34,668,701	$34,668,701	
SE Atlantic Coast	$10,482,916	$10,482,916	
Panhandle Gulf	$0	$0	
SW Gulf	$33,514,474	$33,514,474	
MISC Statewide	$13,825,331	$13,825,331	
TOTAL	$173,924,462	$173,924,462	

Federal vs. State Spending

State	Federal	Local
$113,606,086	$121,616,638	$90,171,887

DEP Beach Restoration & Nourishment Data

Region	Spent	Funded Total
NE Atlantic Coast	$3,880,573	$13,664,868
Central Atlantic Coast	$7,734,250	$8,801,000
SE Atlantic Coast	$36,344,117	$61,973,625
Florida Keys	$1,287,165	$1,633,854
Panhandle Gulf	$12,635,950	$14,050,724
SW Gulf	$24,586,683	$37,286,733
MISC Statewide	$539,522	$1,442,159
TOTAL	$87,008,260	$138,852,963

COE All Data Totals, MISC Statewide Dispersed

Region	Federal
NE Atlantic Coast	88,412,701
Central Atlantic Coast	70,021,180
SE Atlantic Coast	38,021,765
Florida Keys	2,304,221
Panhandle Gulf	14,282,221
SW Gulf	82,499,007
TOTAL	$295,541,095

Region	Federal
NE Atlantic Coast	4,675,440
Central Atlantic Coast	33,048,258
SE Atlantic Coast	25,234,628
Florida Keys	0
Panhandle Gulf	11,978,000
SW Gulf	46,680,312
TOTAL	$121,616,638

Without Maintenance Dredging Costs

COE All Data Totals

Region	Total Spent	Federal	Non-Federal
NE Atlantic Coast	$89,023,040	86,108,480	$2,914,560
Central Atlantic Coast	$94,920,133	67,716,959	$27,203,170.00
SE Atlantic Coast	$59,603,659	35,717,544	$39,835,007.00
Florida Keys	$212,025	0	$212,025.00
Panhandle Gulf	$21,200,000	11,978,000	$9,222,000
SW Gulf	$112,252,512	80,194,786	$31,982,395.00
MISC Statewide	$13,825,331	13,825,331	$0
TOTAL	$391,036,700	295,541,100	$111,369,157

COE Data Totals, without Maintenance Dredging Data

Region	Total Spent	Federal	Non-Federal
NE Atlantic Coast	$7,590,000	4,675,440	$2,914,560
Central Atlantic Coast	$60,251,432	33,048,258	$27,203,170.00
SE Atlantic Coast	$49,120,743	25,234,628	$23,885,890.00
Florida Keys	$212,025	0	$212,025.00
Panhandle Gulf	$21,200,000	11,978,000	$9,222,000
SW Gulf	$78,738,038	46,680,312	$31,982,395.00
TOTAL	$217,112,238	$121,616,638	$95,420,040

DEP Beach Restoration & Nourishment Data

Region	Local Spent	Local Funded
NE Atlantic Coast	$2,550,532	$2,567,532
Central Atlantic Coast	$7,591,922	$7,591,922
SE Atlantic Coast	$33,728,258	$33,775,432
Florida Keys	$1,401,232	$1,401,232
Panhandle Gulf	$390,525	$390,525
SW Gulf	$22,776,934	$28,932,495
MISC Statewide	$508,766	$508,766
TOTAL	$68,948,169	$75,167,904

DEP Inlet Activities Data

Region	Spent	Funded Total
NE Atlantic Coast	$636,075	$636,075
Central Atlantic Coast	$12,320,744	$9,015,138
SE Atlantic Coast	$4,203,709	$4,328,848
Florida Keys	$0	$0
Panhandle Gulf	$743,472	$743,472
SW Gulf	$2,438,651	$2,438,651
MISC Statewide	$388,646	$388,646
TOTAL	$20,731,297	$17,550,830

DEP Inlet Activities Data

Region	Local Spent	Local Funded
NE Atlantic Coast	$441,084	$441,084
Central Atlantic Coast	$14,092,754	$14,133,074
SE Atlantic Coast	$4,284,325	$4,284,325
Florida Keys	$0	$0
Panhandle Gulf	$466,627	$754,627
SW Gulf	$892,102	$892,102
MISC Statewide	$80,540	$80,540
TOTAL	$20,257,432	$20,585,752

DEP Post Storm Data

Region	Spent	Funded Total
NE Atlantic Coast	$4,957	$4,957
Central Atlantic Coast		$0
SE Atlantic Coast		$0
Florida Keys		$0
Panhandle Gulf		$0
SW Gulf		$0
MISC Statewide	$2,882,058	$2,822,407
TOTAL	$2,887,015	$2,827,364

DEP Post Storm Data

Region	Local Spent	Local Funded
NE Atlantic Coast	$0	$0
Central Atlantic Coast	$0	$0
SE Atlantic Coast	$0	$0
Florida Keys	$0	$0
Panhandle Gulf	$0	$0
SW Gulf	$0	$0
MISC Statewide	$628,338	$627,640
TOTAL	$628,338	$627,640

DEP Other Data

Region	Spent	Funded Total
NE Atlantic Coast		$0
Central Atlantic Coast		$0
SE Atlantic Coast		$0
Florida Keys		$0
Panhandle Gulf		$0
SW Gulf		$0
MISC Statewide	$2,979,514	$3,011,921
TOTAL	$2,979,514	$3,011,921

DEP Other Data

Region	Local Spent	Local Funded
NE Atlantic Coast	$0	$0
Central Atlantic Coast	$0	$0
SE Atlantic Coast	$0	$0
Florida Keys	$0	$0
Panhandle Gulf	$0	$0
SW Gulf	$0	$0
MISC Statewide	$337,948	$337,948
TOTAL	$337,948	$337,948

DEP All Data Totals

Region	Funded Total	Spent
NE Atlantic Coast	$14,305,900	$4,521,605
Central Atlantic Coast	$17,816,138	$20,054,994
SE Atlantic Coast	$66,302,473	$40,547,826
Florida Keys	$1,633,854	$1,287,165
Panhandle Gulf	$14,794,196	$13,379,422
SW Gulf	$39,725,384	$27,025,334
MISC Statewide	$7,665,132	$6,789,740
TOTAL	$162,243,077	$113,606,086

DEP All Data Totals, Local

Region	Local Spent	Local Funded
NE Atlantic Coast	$2,991,616	$3,008,616
Central Atlantic Coast	$21,684,676	$21,724,996
SE Atlantic Coast	$38,012,583	$38,059,757
Florida Keys	$1,401,232	$1,401,232
Panhandle Gulf	$857,152	$1,145,152
SW Gulf	$23,669,036	$29,824,597
MISC Statewide	$1,555,592	$1,554,894
TOTAL	$90,171,887	$96,719,244

DEP All Data Totals. MISC Statewide Dispersed

Region	Spent
NE Atlantic Coast	$5,653,228
Central Atlantic Coast	$21,186,617
SE Atlantic Coast	$41,679,449
Florida Keys	$2,418,788
Panhandle Gulf	$14,511,045
SW Gulf	$28,156,957
TOTAL	$113,606,084

COE & DEP All Data Totals (COE Federal Total, DEP Spent Total)

Region	Funded Total
NE Atlantic Coast	$94,065,929
Central Atlantic Coast	$91,207,797
SE Atlantic Coast	$79,701,214
Florida Keys	$4,723,009
Panhandle Gulf	$28,793,266
SW Gulf	$110,655,964
TOTAL	$409,147,179

DEP All Data Totals. MISC Statewide Dispersed

Region	Funded Total
NE Atlantic Coast	$15,583,422
Central Atlantic Coast	$19,093,660
SE Atlantic Coast	$67,579,995
Florida Keys	$2,911,376
Panhandle Gulf	$16,071,718
SW Gulf	$41,002,906
TOTAL	$162,243,077

(Local) DEP All Data Totals. MISC Statewide Dispersed

Region	Local Spent
NE Atlantic Coast	$3,250,881
Central Atlantic Coast	$21,943,941
SE Atlantic Coast	$38,271,848
Florida Keys	$1,660,497
Panhandle Gulf	$1,116,417
SW Gulf	$23,928,301
TOTAL	$90,171,885

All Totals for Regions

Region	Local Total	Federal Total	State Total
NE Atlantic Coast	$3,250,881	88,412,701	$5,653,228
Central Atlantic Coast	$21,943,941	70,021,180	$21,186,617
SE Atlantic Coast	$38,271,848	38,021,765	$41,679,449
Florida Keys	$1,660,497	2,304,221	$2,418,788
Panhandle Gulf	$1,116,417	14,282,221	$14,511,045
SW Gulf	$23,928,301	82,499,007	$28,156,957
TOTAL	$90,171,885	$295,541,095	$113,606,084

All Totals for Regions, without Federal Dredging Data

Region	Local Total	Federal Total	State Total
NE Atlantic Coast	$3,250,881	4,675,440	$5,653,228
Central Atlantic Coast	$21,943,941	33,048,258	$21,186,617
SE Atlantic Coast	$38,271,848	25,234,628	$41,679,449
Florida Keys	$1,660,497	0	$2,418,788
Panhandle Gulf	$1,116,417	11,978,000	$14,511,045
SW Gulf	$23,928,301	46,680,312	$28,156,957
TOTAL	$90,171,885	$121,616,638	$113,606,084

DEP Beach Rest & Nour by Year

1992

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Nassau County Dune Protection	1992	$44,500	$50,000	$17,000	$17,000
SE Atlantic Coast	Sand Key Dune Restoration	1992	$67,500	$600,000	$22,402	$393,992
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1992	$6,292	$872,437	$2,118	$335,810
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1992	$3,506,315	$4,800,000	$1,318,838	$1,570,890
SE Atlantic Coast	Delray Beach Nourishment	1992	$343,348	$2,007,236	$64,115	$1,333,039
SE Atlantic Coast	Boca Raton Sand Transfer	1992	$92,500	$132,400	$34,303	$41,676
SW Gulf	Venice Beach Restoration	1992	$61,181	$1,745,192	$20,393	$694,606
SW Gulf	Captiva Island Nourishment	1992	$144,957		$134,147	$11,841,763
SW Gulf	Bowman Beach Dunes Restoration	1992	$50,000	$50,000	$101,000	$101,000
SW Gulf	Indian Shores Beach Restoration	1992	$4,173,513	$4,173,513	$2,976,487	$3,078,627
SW Gulf	Englewood Dune Protection	1992	$63,000	$63,000	$0	$0
		TOTAL	$8,553,106	$14,493,778	$4,690,803	$19,408,403

1993

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	Sand Key Dune Restoration	1993	$54,500		$18,116	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1993	$24,996		$0	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1993	$139,653		$46,401	$0
SE Atlantic Coast	Delray Beach Nourishment	1993	$1,126,449		$1,168,189	$0
SE Atlantic Coast	Boca Raton Sand Transfer	1993	$40,000		$7,373	$0
SW Gulf	Venice Beach Restoration	1993	$172,077		$57,359	$0
SW Gulf	Lido Key Dune Protection Project	1993	$50,000	$50,000	$0	$0
SW Gulf	Collier Co Dune Protection Project	1993	$39,851	$71,532	$15,103	$20,450
SW Gulf	Captiva Island Nourishment	1993	$104,825		$90,365	$0
SW Gulf	Indian Shores Beach Restoration	1993	$237,797	$1,188,987	$20,428	$0
		TOTAL	$1,990,148	$1,310,519	$1,423,334	$20,450

1994

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	Sand Key Dune Restoration	1994	$75,600		$25,564	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1994	$179,710		$8,416	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1994	$94,501		$31,500	$0
SE Atlantic Coast	Coral Cove Shore Protection	1994	$204,529		$68,176	$99,752
SW Gulf	Venice Beach Restoration	1994	$1,511,933		$47,545	$0
SW Gulf	Venice Beach Restoration	1994	$850,000	$850,000	$0	$0
SW Gulf	Collier Co Dune Protection Project	1994	$21,500		$5,347	$0
SW Gulf	Longboat Key Beach Nourishment	1994	$1,975,000	$2,864,160	$7,353,016	$7,786,261
SW Gulf	Indian Shores Beach Restoration	1994	$237,797		$20,428	$0
		TOTAL	$5,150,570	$3,714,160	$7,559,992	$7,886,013

DEP Beach Rest & Nour by Year

1995

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Flagler Dune Restoration	1995	$28,500	$50,000	$9,477	$9,477
NE Atlantic Coast	Jacksonville Beach Nourishment	1995	$2,612,783	$3,964,500	$1,375,431	$1,375,431
SE Atlantic Coast	Sand Key Dune Restoration	1995	$6,200		$2,055	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1995	$73,000	$421,500	$44,416	$247,250
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1995	$589,629		$63,508	$0
SE Atlantic Coast	Jupiter Carlin Beach Restoration	1995	$126,000	$126,000	$238,540	$0
SE Atlantic Coast	Coral Cove Shore Protection	1995	$22,648		$7,550	$0
SE Atlantic Coast	Delray Beach Nourishment	1995	$25,941		$14,849	$0
SW Gulf	Longboat Key Beach Nourishment	1995	$257,585		$102,374	$0
SW Gulf	Indian Shores Beach Restoration	1995	$237,797		$20,428	$0
		TOTAL	$3,980,083	$4,562,000	$1,878,628	$1,632,158

1996

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	So. Palm Beach Res. Env. Assessment	1996	$56,250		$23,535	$23,535
SE Atlantic Coast	Sand Key Dune Restoration	1996	$396,700		$95,870	$0
SE Atlantic Coast	Sand Key Dune Restoration	1996	$62,500	$187,500	$166,088	$0
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1996	$80,783	$1,875,000	$36,500	$599,831
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1996	$113,066		$66,632	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1996	$3,152,207	$3,604,589	$0	$0
SE Atlantic Coast	Juno Beach	1996	$74,850		$0	$0
SE Atlantic Coast	Juno Beach	1996	$84,900		$0	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1996	$176,287		$0	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1996	$32,072	$309,485	$10,691	$148,071
SE Atlantic Coast	Delray Beach Nourishment	1996	$24,627		$14,097	$0
SW Gulf	Longboat Key Beach Nourishment	1996	$513,150		$122,059	$0
SW Gulf	Indian Shores Beach Restoration	1996	$237,797		$20,428	$0
		TOTAL	$5,005,189	$5,976,574	$555,900	$771,437

1997

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	Sand Key Dune Restoration	1997	$56,000		$18,652	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1997	$110,615			
SE Atlantic Coast	Key Biscayne Dune Restoration	1997	$55,200	$70,000	$23,657	$23,657
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1997	$60,798		$21,136	$0
SW Gulf	Venice Beach Restoration	1997	$163,651	$200,000	$56,212	$0
SW Gulf	Indian Shores Beach Restoration	1997	$237,797		$20,428	$0
SW Gulf	Indian Shores Beach Restoration	1997	$5,153,114	$5,359,685	$0	$0
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	1997	$636,942	$12,582,000	$12,909	$390,525
		TOTAL	$6,474,117	$18,211,685	$152,994	$414,182

1998

DEP Beach Rest & Nour by Year

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1998	$0	$150,000	$48,549	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	1998	$106,637		$66,017	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1998	$382,500		$136,651	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1998	$152,005		$50,669	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1998	$13,163	$132,121	$4,388	$0
SE Atlantic Coast	Delray Beach Nourishment	1998	$52,007		$29,769	$0
SW Gulf	Captiva Island Nourishment	1998	$229,064		$0	$0
SW Gulf	Captiva Island Nourishment	1998	$2,632,377	$2,669,817	$5,274,272	$0
SW Gulf	Longboat Key Beach Nourishment	1998	$651,817	$651,817	$0	$0
SW Gulf	Indian Shores Beach Restoration	1998	$0	$449,378	$0	$0
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	1998	$296,995		$184,660	$0
		TOTAL	$4,516,565	$4,053,133	$5,794,975	$0

1999

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ft. Clinch Shore Protection Project	1999	$0	$275,630	$0	$0
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1999	$1,424,915		$485,277	$0
SE Atlantic Coast	Ocean Ridge Beach Nourishment	1999	$0	$98,400	$29,505	$0
SE Atlantic Coast	Jupiter Island Beach Nourishment	1999	$0	$132,922	$687,078	$296,000
SE Atlantic Coast	Ft. Pierce Beach Restoration	1999	$2,073,091	$3,930,750	$2,073,091	$2,267,933
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	1999	$112,500		$37,500	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1999	$25,073		$8,358	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	1999	$7,869		$2,623	$0
SE Atlantic Coast	Broward County Shore Protection Project	1999	$0	$313,293	$0	$0
SE Atlantic Coast	Boca Raton Beach Nourishment	1999	$1,005,500	$1,005,500	$335,028	$1,147,745
SW Gulf	Venice Beach Restoration	1999	$36,347		$29,232	$0
SW Gulf	Venice Beach Restoration	1999	$224,344	$357,626	$234,789	$0
SW Gulf	Lido Key Beach Restoration	1999	$713,064	$863,625	$2,126,559	$2,608,700
SW Gulf	Captiva Island Shore Protection	1999	$0	$43,820	$0	$0
SW Gulf	Treasure Island (Sunset Beach) Nourishment	1999	$0	$386,873	$0	$0
SW Gulf	Longboat Key Beach Nourishment	1999	$87,760		$91,328	$0
SW Gulf	Indian Shores Beach Restoration	1999	$0	$513,541	$0	$0
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	1999	$10,654,220		$192,956	$0
MISC Statewide	Rest Park Improvements	1999	$150,000	$150,000	$0	$0
		TOTAL	$16,514,683	$8,071,980	$6,333,324	$6,320,378

2000

DEP Beach Rest & Nour by Year

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Anna Marie Island Beach Nourishment Project	2000	$0	$1,613,709	$0	$0
NE Atlantic Coast	Duval County Beach Nourishment	2000	$0	$2,797,000	$0	$0
NE Atlantic Coast	St. Johns County Shore Protection	2000	$0	$44,690	$0	$0
NE Atlantic Coast	Nassau County Beach Restoration Project	2000	$26,275	$54,500	$26,636	$74,329
NE Atlantic Coast	South Amelia Island Feasibility Study	2000	$0	$5,000	$0	$0
SE Atlantic Coast	Sand Key Dune Restoration	2000	$69,000		$45,325	$0
SE Atlantic Coast	Palm Beach Island Beach Restoration	2000	$0	$673,454	$0	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2000	$10,913		$6,542	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2000	$100,548		$0	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2000	$150,794	$340,501	$167,965	$673,850
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2000	$5,224	$90,600	$5,224	$0
SE Atlantic Coast	Key Biscayne Beach Nourishment	2000	$152,312	$1,189,218	$169,235	$394,481
SE Atlantic Coast	Key Biscayne Beach Nourishment	2000	$0	$70,000	$0	$0
SE Atlantic Coast	Ft. Pierce Beach Restoration	2000	$108,535		$108,535	$0
SE Atlantic Coast	Ft. Pierce Beach Restoration	2000	$0	$115,880	$0	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	2000	$39,531		$13,177	$0
SE Atlantic Coast	Dade Co. Bch Rehab Monitoring	2000	$111,087		$37,029	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2000	$668,275	$1,205,511	$2,315,732	$8,579,812
SE Atlantic Coast	Dade County Beach Erosion Control	2000	$1,621,192	$10,508,550	$842,540	$0
SE Atlantic Coast	Deerfield Beach Restoration	2000	$736,500	$1,431,500	$2,124,758	$2,193,449
SE Atlantic Coast	Delray Beach Nourishment	2000	$73,045		$42,020	$0
SE Atlantic Coast	Broward County Shore Protection Project	2000	$83,215	$83,215	$269,345	$2,253,647
SW Gulf	Venice Beach Restoration	2000	$133,281		$249,076	$0
SW Gulf	Lido Key Beach Restoration	2000	$44,749		$80,771	$0
SW Gulf	Captiva Island Nourishment	2000	$37,440		$187,418	$0
SW Gulf	Captiva Island Shore Protection	2000	$0	$7,990	$0	$0
SW Gulf	Longboat Key Beach Nourishment	2000	$30,294		$117,484	$0
SW Gulf	Longboat Key Beach Nourishment	2000	$0	$75,000	$0	$0
Central Atlantic Coas	Brevard Co. Shore Protection Proj.	2000	$63,566	$4,850,000	$63,588	$7,591,922
Panhandle Gulf	Panama City Beach Restoration (Post-Opal)	2000	$843,819		$0	$0
Florida Keys	Smathers Beach Nourishment	2000	$341,035	$1,173,600	$378,928	$1,173,544
MISC Statewide	Regional Sediment Management (USACE)	2000	$25,000		$0	$0
		TOTAL	$5,475,630	$26,329,918	$7,251,328	$22,935,034

2001

DEP Beach Rest & Nour by Year

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Nassau County Beach Restoration Project	2001	$26,690		$27,191	$0
NE Atlantic Coast	St. Johns County Beach Restoration	2001	$593,607	$2,590,599	$593,607	$593,607
SE Atlantic Coast	Singer Island Shore Protection Project	2001	$0	$130,000	$0	$0
SE Atlantic Coast	Palm Beach Island Beach Restoration	2001	$0	$5,685,728	$0	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2001	$351,834		$89,144	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2001	$461,861	$461,861	$229,560	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2001	$99,516	$419,945	$64,841	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2001	$12,229		$37,249	$0
SE Atlantic Coast	Key Biscayne Beach Nourishment	2001	$172,849		$192,054	$0
SE Atlantic Coast	Hutchinson Island Bch Nourishment	2001	$632,050	$632,050	$758,275	$0
SE Atlantic Coast	Hutchinson Island Bch Nourishment	2001	$109,457	$1,731,320	$132,054	$0
SE Atlantic Coast	Hollywood Hallendale Beach Nour.	2001	$94,624		$0	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2001	$537,235		$537,235	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2001	$3,142,996		$3,301,593	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2001	$157,889	$171,889	$31,889	$0
SE Atlantic Coast	Deerfield Beach Restoration	2001	$40,451		$0	$0
SE Atlantic Coast	Delray Beach Nourishment	2001	$67,038	$67,039	$57,472	$57,472
SE Atlantic Coast	Delray Beach Nourishment	2001	$59,417	$1,306,235	$2,315	$2,315
SE Atlantic Coast	Broward County Shore Protection Project	2001	$195,958	$4,998,710	$172,830	$0
SW Gulf	Venice Beach Restoration Project	2001	$0	$118,951	$0	$0
SW Gulf	Lee County Shore Protection Project	2001	$27,335	$27,474	$35,109	$797,436
SW Gulf	Lee County Shore Protection Project	2001	$322,312	$712,967	$401,328	$0
SW Gulf	Lee County Shore Protection Project	2001	$122,275	$122,274	$149,446	$0
SW Gulf	Lee County Shore Protection Project	2001	$0	$8,179,220	$0	$0
SW Gulf	Lido Key Beach Restoration	2001	$105,812		$201,822	$0
SW Gulf	Lido Key Beach Restoration	2001	$77,602	$77,602	$199,548	$0
SW Gulf	Lido Key Nourishment	2001	$704,107	$2,490,350	$782,342	$1,976,733
SW Gulf	Captiva Island Shore Protection	2001	$0	$542,173	$0	$0
SW Gulf	North Treasure Island Beach Nourishment & Te	2001	$521,650	$521,650	$0	$0
SW Gulf	Longboat Key Beach Nourishment	2001	$0	$155,224	$0	$0
SW Gulf	Egmont Key Shore Protection	2001	$34,000	$34,000	$0	$0
Central Atlantic Coas	Brevard Co. Shore Protection Proj.	2001	$4,524,321		$4,524,313	$0
Panhandle Gulf	Bonita Beach Nourishment Project	2001	$0	$833,724	$0	$0
Florida Keys	Smathers Beach Nourishment	2001	$727,434		$794,616	$0
Florida Keys	Smathers Beach Nourishment	2001	$61,824		$61,824	$227,688
MISC Statewide	North County Shore Protection (Ambersand Bea	2001	$100,000	$100,000	$87,948	$508,766
MISC Statewide	North County Shore Protection (Ambersand Bea	2001	$206,100	$205,593	$179,671	$0
MISC Statewide	North County Shore Protection (Ambersand Bea	2001	$27,000	$229,400	$24,109	$0
		TOTAL	$14,317,473	$32,545,978	$13,669,385	$4,164,017

2002

DEP Beach Rest & Nour by Year

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Collier County Beach Nourishment	2002	$81,425	$391,792	$497,688	$497,688
NE Atlantic Coast	Collier County Beach Nourishment	2002	$108,389	$893,248	$0	$0
NE Atlantic Coast	Jacksonville Beach Dune Protection	2002	$53,931	$484,200	$0	$0
NE Atlantic Coast	Nassau County Beach Restoration Project	2002	$673		$673	$0
NE Atlantic Coast	Nassau County Beach Restoration Project	2002	$3,800	$150,000	$2,829	$0
NE Atlantic Coast	Sawpit Creek-Nassau Sound Interlocal Agree.	2002	$300,000	$300,000	$0	$0
SE Atlantic Coast	Martin Co/4-Mile Beach Restoration	2002	$30,629		$36,518	$0
SE Atlantic Coast	Juno Beach Restoration Project	2002	$1,924,007	$1,999,920	$1,999,920	$5,544,606
SE Atlantic Coast	Juno Beach Restoration Project	2002	$3,190,217	$3,583,139	$3,544,686	$0
SE Atlantic Coast	Juno Beach Restoration Project	2002	$0	$799,193	$0	$0
SE Atlantic Coast	Jupiter Island Beach Nourishment	2002	$0	$1,504,856	$2,277,922	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2002	$158,946		$158,946	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2002	$84,794		$84,794	$0
SE Atlantic Coast	Jupiter/Carlin Beach Nourishment	2002	$219,672	$487,112	$219,672	$0
SE Atlantic Coast	Key Biscayne Beach Nourishment	2002	$100,687		$33,192	$0
SE Atlantic Coast	Hutchinson Island Bch Nourishment	2002	$1,305,256		$1,567,227	$2,457,556
SE Atlantic Coast	Ft. Pierce Beach Restoration	2002	$86,307		$86,307	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2002	$1,323,212		$1,372,657	$0
SE Atlantic Coast	Dade County Beach Erosion Control	2002	$31,509		$178,166	$0
SE Atlantic Coast	Deerfield Beach Restoration	2002	$13,665		$68,691	$0
SE Atlantic Coast	Broward County Shore Protection Project	2002	$219,606		$1,811,472	$0
SE Atlantic Coast	Boca Raton Beach Nourishment	2002	$711,982	$764,819	$671,210	$0
SE Atlantic Coast	Boca Raton Beach Nourishment	2002	$186,627	$752,247	$141,507	$0
SW Gulf	Venice Beach Restoration Project	2002	$23,822	$131,792	$0	$0
SW Gulf	Lee County Shore Protection Project	2002	$177,199		$211,553	$0
SW Gulf	Lido Key Nourishment	2002	$1,074,952		$1,194,391	$0
SW Gulf	Honeymoon Island Beach Restoration	2002	$80,758	$1,537,500	$26,919	$26,919
Central Atlantic Coas	Brevard Co. Shore Protection Proj.	2002	$262,123		$162,219	$0
Central Atlantic Coas	Brevard Co. Shore Protection Proj.	2002	$337,439	$295,000	$295,000	$0
Central Atlantic Coas	Brevard Co. Shore Protection Proj.	2002	$2,546,801	$3,656,000	$2,546,802	$0
Panhandle Gulf	Panhandle Sand Search	2002	$203,974	$600,000		
Panhandle Gulf	Bonita Beach Nourishment Project	2002	$0	$35,000	$0	$0
Florida Keys	Smathers Beach Nourishment	2002	$156,872	$460,254	$165,864	$0
MISC Statewide	North County Shore Protection (Ambersand Bea	2002	$31,422	$638,215	$217,038	$0
		TOTAL	$15,030,696	$19,464,287	$19,573,863	$8,526,769

DEP Inlet Activities by Year

1992

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SW Gulf	Longboat Pass Inlet Management Plan Study	1992	$72,900	$95,998	$24,300	$32,000
Central Atlantic Coast	St. Lucie Inlet Mgmt. Plan	1992	$84,405	$150,000	$28,135	$50,000
Central Atlantic Coast	St. Lucie Inlet Sand Transfer Dune Protection	1992	$299,656	$399,999	$100,521	$325,724
Central Atlantic Coast	Sebastian Inlet Physical Model	1992	$34,997	$166,309	$0	$0
Central Atlantic Coast	Ft. Pierce Inlet Mgmt Plan	1992	$132,278	$132,278	$0	$0
MISC Statewide	Redfish/Blind Pass Mgmt Plan	1992	$173,639	$173,639	$57,750	$57,750
		TOTAL	$797,875	$1,118,223	$210,706	$465,474

1993

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon Inlet Mgmt Plan	1993	$58,946	$90,607	$19,648	$30,182
SE Atlantic Coast	Port Everglades Inlet Mgmt. Study	1993	$18,122	$78,762	$6,037	$72,849
SE Atlantic Coast	Haulover Inlet IMP	1993	$14,344	$110,815	$4,781	$36,937
SW Gulf	Longboat Pass Inlet Management Plan Study	1993	$5,024		$1,675	$0
SW Gulf	Hillsboro Inlet Management Study	1993	$93,500	$93,500	$31,103	$31,103
SW Gulf	Doctor Pass Inlet Management Plan	1993	$15,604	$259,102	$15,604	$219,349
SW Gulf	Big Sarasota/New Pass Inlet Mgmt Plan	1993	$94,245	$234,872	$31,415	$78,624
Central Atlantic Coast	Sebastian Inlet Physical Model	1993	$63,812		$0	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1993	$47,047	$927,750	$47,247	$743,976
		TOTAL	$410,644	$1,795,408	$157,510	$1,213,020

1994

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon Inlet Mgmt Plan	1994	$31,661		$10,534	$0
SE Atlantic Coast	Haulover Inlet IMP	1994	$40,694		$13,564	$0
SW Gulf	St. Mary's Inlet Sand Transfer	1994	$400,000	$1,042,000	$0	$0
SW Gulf	St. Mary's Inlet Sand Transfer	1994	$642,000		$0	$0
SW Gulf	Wiggins Pass IM Study	1994	$39,357	$66,000	$13,119	$75,822
SW Gulf	John's Pass Inlet	1994	$59,000	$59,000	$19,682	$19,682
SW Gulf	Longboat Pass Inlet Management Plan Study	1994	$18,074		$6,025	$0
SW Gulf	Doctor Pass Inlet Management Plan	1994	$15,090		$15,090	$0
SW Gulf	Big Sarasota/New Pass Inlet Mgmt Plan	1994	$140,627		$47,209	$0
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1994	$111,357	$652,250	$37,119	$5,487,273
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1994	$300,000		$274,462	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1994	$48,334		$20,217	$0
Panhandle Gulf	St. Augustine IMP	1994	$4,995	$144,298	$1,110	$77,217
		TOTAL	$1,851,189	$1,963,548	$458,131	$5,659,994

DEP Inlet Activities by Year

1995

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1995	$273,750	$545,468	$91,250	$410,902
SW Gulf	St. Mary's IMP	1995	$74,801	$172,493	$24,935	$119,829
SW Gulf	Venice Inlet Management Plan	1995	$108,000	$108,000	$36,000	$36,000
SW Gulf	Gordon Pass Inlet Mgmt Plan	1995	$18,455	$88,999	$18,455	$83,796
SW Gulf	Doctor Pass Inlet Management Plan	1995	$14,250		$14,250	$0
Central Atlantic Coast	Port Canaveral Inlet Mgmt Plan	1995	$150,000	$150,000	$56,373	$56,373
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1995	$288,456		$132,267	$0
Central Atlantic Coast	Canaveral Inlet Sand Transfer	1995	$300,000	$300,000	$100,000	$100,000
Panhandle Gulf	St. Augustine IMP	1995	$17,023		$5,489	$0
		TOTAL	$1,244,735	$1,364,960	$479,019	$806,900

1996

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1996	$33,241		$39,091	$0
SE Atlantic Coast	Port Everglades Inlet Mgmt. Study	1996	$60,640		$66,812	$0
SE Atlantic Coast	Lake Worth IM Study	1996	$82,279	$99,999	$27,426	$33,338
SE Atlantic Coast	Haulover Inlet IMP	1996	$55,777		$18,592	$0
SW Gulf	St. Mary's IMP	1996	$53,481		$19,775	$0
SW Gulf	Hurricane Pass/Willy's Cut IMP	1996	$39,257	$39,257	$13,085	$13,085
Central Atlantic Coast	Port Canaveral Inlet Management	1996	$174,330	$1,329,474	$61,266	$892,510
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1996	$147,773		$60,262	$0
Panhandle Gulf	St. Augustine IMP	1996	$67,745		$22,581	$0
Panhandle Gulf	St. Augusting Inlet Sand Transfer	1996	$129,036	$129,036	$43,104	$43,104
		TOTAL	$843,559	$1,597,766	$371,994	$982,037

1997

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1997	$70,000		$23,334	$0
SE Atlantic Coast	So. Lake Worth Inlet Mgmt Plan Study	1997	$90,880	$90,880	$90,880	$90,880
SW Gulf	St. Mary's IMP	1997	$41,152		$74,099	$0
SW Gulf	Wiggins Pass IM Study	1997	$26,643		$62,703	$0
SW Gulf	Gordon Pass Inlet Mgmt Plan	1997	$28,882		$28,883	$0
SW Gulf	Doctor Pass Inlet Management Plan	1997	$214,158		$174,405	$0
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1997	$110,000		$832,061	$0
Central Atlantic Coast	Port Canaveral Inlet Management	1997	$276,245		$92,094	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1997	$12,207		$8,737	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1997	$23,293		$251,956	$0
Panhandle Gulf	St. Augustine IMP	1997	$21,651		$37,075	$0
MISC Statewide	Big Hickory Pass/New Pass Management Plan	1997	$68,370	$68,370	$22,790	$22,790
		TOTAL	$983,481	$159,250	$1,699,017	$113,670

DEP Inlet Activities by Year

1998

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	Jupiter IMP Implementation	1998	$70,334	$1,055,431	$70,334	$1,538,991
SE Atlantic Coast	Lake Worth IM Study	1998	$11,629		$3,882	$0
SE Atlantic Coast	Lake Worth IMP Implementation	1998	$233,084	$721,957	$454,478	$949,666
SE Atlantic Coast	Boca Raton IMP Implementation	1998	$927,906	$1,033,795	$309,302	$521,080
SE Atlantic Coast	Boca Raton Inlet Bypass Engineering & Design	1998	$127,500	$127,500	$0	$0
SW Gulf	St. Mary's IMP	1998	$3,059		$1,020	$0
SW Gulf	Hillsboro Inet Management Study	1998	$56,575	$56,575	$57,233	$57,233
Central Atlantic Coast	Sebastian Inlet Studies/Sand Transfer	1998	$130,893		$4,343,631	$0
Central Atlantic Coast	Port Canaveral Inlet Management	1998	$198,990		$65,072	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1998	$19,863		$1,898	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1998	$5,693		$2,124	$0
Panhandle Gulf	St. Augustine IMP	1998	$32,884		$10,962	$0
MISC Statewide	East Pass Management Study	1998	$9,562	$146,637	$0	$0
		TOTAL	$1,827,972	$3,141,895	$5,319,936	$3,066,970

1999

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon IMP Implementation	1999	$123,367		$123,672	$0
SE Atlantic Coast	Bakers Haulover Inlet Management	1999	$200,000	$200,000	$400,000	$400,000
SE Atlantic Coast	Lake Worth IM Study	1999	$6,091		$2,030	$0
SE Atlantic Coast	Lake Worth IMP Implementation	1999	$71,864		$79,870	$0
SW Gulf	Gordon Pass Inlet Mgmt Plan	1999	$41,662		$36,458	$0
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	1999	$127,907		$127,907	$0
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	1999	$1,198,750	$2,423,315	$1,198,750	$0
Central Atlantic Coast	St. Lucie Inlet Sand Transfer Dune Protection	1999	$22,434		$7,479	$0
Central Atlantic Coast	Sebastian Inlet IMP Implementation	1999	$413,150		$413,150	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$3,268		$18,918	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$29,118		$100,375	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$154,500		$12,887	$0
Central Atlantic Coast	Ft. Pierce Inlet Stabalization	1999	$148,225		$68,633	$0
Panhandle Gulf	St. Andrews Inlet Mgmt Study	1999	$50,000	$50,000	$0	$0
MISC Statewide	East Pass Management Study	1999	$97,608		$0	$0
		TOTAL	$2,687,944	$2,673,315	$2,590,129	$400,000

DEP Inlet Activities by Year

2000

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon IMP Implementation	2000	$0		$0	$0
SE Atlantic Coast	Jupiter IMP Implementation	2000	$136,273		$136,273	$0
SE Atlantic Coast	Jupiter IMP Implementation	2000	$621,897		$1,030,177	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2000	$194,418		$194,418	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2000	$222,590		$220,900	$0
SW Gulf	Stump Pass Inlet Mgmt. Study	2000	$22,758	$38,866	$25,287	$74,231
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	2000	$1,122,092		$1,122,092	$4,756,377
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	2000	$1,500,000		$1,367,018	$0
Central Atlantic Coast	St. Lucie Inlet IMP Implementation	2000	$775,000		$940,610	$0
Central Atlantic Coast	St. Lucie Inlet Sand Transfer Dune Protection	2000	$78,000		$217,724	$0
Central Atlantic Coast	Sebastian Inlet IMP Implementation	2000	$337,499		$37,500	$0
Central Atlantic Coast	Sebastian Inlet IMP Implementation	2000	$37,500		$237,908	$0
Panhandle Gulf	St. Andrews Bay Entrance Feasibility	2000	$125,138	$125,138	$0	$0
MISC Statewide	East Pass Management Study	2000	$39,467		$0	$0
MISC Statewide	Ft. George Inlet Port Erosion	2000	$0	$0		
		TOTAL	$5,212,632	$164,004	$5,529,907	$4,830,608

2001

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
NE Atlantic Coast	Ponce DeLeon IMP Implementation	2001	$22,555		$133,555	$0
NE Atlantic Coast	Ponce DeLeon IMP Implementation	2001	$22,555		$0	$0
SE Atlantic Coast	South Lake Worth IMP Implementation	2001	$0		$0	$202,941
SE Atlantic Coast	Jupiter IMP Implementation	2001	$226,927		$302,207	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2001	$359,841	$481,630	$160,987	$437,643
SE Atlantic Coast	Boca Raton IMP Implementation	2001	$105,889		$105,889	$0
SW Gulf	Stump Pass Inlet Mgmt. Study	2001	$16,108		$48,944	$0
Central Atlantic Coast	St. Lucie IMP Implementation	2001	$0	$0	$13,301	$13,301
Central Atlantic Coast	Sebastian Inlet IMP Implementation	2001	$350,000		$350,000	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2001	$112,200		$112,199	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2001	$286,500		$286,500	$0
Central Atlantic Coast	Port Canaveral Inlet Management	2001	$143,544		$139,472	$0
Central Atlantic Coast	Ft. Pierce IMP Implementation	2001	$82,000	$337,000	$82,000	$337,000
Central Atlantic Coast	Ft. Pierce IMP Implementation	2001	$114,576		$114,576	$0
Central Atlantic Coast	Hutchinson Island Beach Nourishment	2001	$632,050	$2,046,763	$0	$0
Central Atlantic Coast	Hutchinson Island Beach Nourishment	2001	$109,457		$0	$0
Panhandle Gulf	St. Augustine Inlet/Salt Run Sand	2001	$180,000	$295,000	$32,000	$634,306
Panhandle Gulf	St. Augustine Inlet/Salt Run Sand	2001	$115,000		$314,306	$0
		TOTAL	$2,879,202	$3,160,393	$2,195,936	$1,625,191

2002

DEP Inlet Activities by Year

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
SE Atlantic Coast	South Lake Worth IMP Implementation	2002	$202,941	$328,079	$202,941	$0
SE Atlantic Coast	Lake Worth IMP Implementation	2002	$121,789		$276,656	$0
SW Gulf	Stump Pass Bypass	2002	$46,036	$46,036	$0	$0
SW Gulf	Hillsboro Inlet Management Plan Implementaio	2002	$37,953	$37,953	$51,348	$51,348
Central Atlantic Coast	Port Canaveral Inlet Management	2002	$137,665		$135,907	$0
Central Atlantic Coast	Ft. Pierce IMP Implementation	2002	$140,424		$140,424	$0
Central Atlantic Coast	Hutchinson Island Beach Nourishment	2002	$1,305,256		$0	$0
	Boca Raton IMP Implementation	2002	$0	$0	$105,889	$0
	Sebastian Inlet IMP Implementation	2002	$0	$0	$331,982	$1,370,540
		TOTAL	$1,992,064	$412,068	$1,245,147	$1,421,888

1992

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
		TOTAL	$0	$0	$0	$0

1993

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Beach Access Study DEP U of F	1993	$9,889	$100,429	$0	$0
		TOTAL	$9,889	$100,429	$0	$0

1994

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Beach Access Study DEP U of F	1994	$90,540		$0	$0
MISC Statewide	Beach Access Study DEP/DCA	1994	$138,615	$138,615	$0	$0
MISC Statewide	Post Storm Redevelopment Study	1994	$153,500	$153,500	$0	$0
MISC Statewide	Post Storm Redevlopment - Phase II	1994	$108,000	$133,000	$0	$0
MISC Statewide	Post Storm Study	1994	$173,763	$173,763	$0	$0
		TOTAL	$664,418	$598,878	$0	$0

1995

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Post Storm Redevlopment - Phase II	1995	$25,000		$0	$0
		TOTAL	$25,000	$0	$0	$0

1996

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Post Storm Redevelop Phase III	1996	$127,000	$127,000	$0	$0
		TOTAL	$127,000	$127,000	$0	$0

1997

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1997	$24,499		$0	$0
		TOTAL	$24,499	$0	$0	$0

1998

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Development of a Post-Storm Foundation	1998	$31,807	$39,921	$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1998	$84,899	$210,245	$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1998	$4,507		$0	$0
MISC Statewide	OK/Strategic Management Plan	1998	$311,344	$520,025	$0	$0
		TOTAL	$432,557	$770,191	$0	$0

1999

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	(Task 4) Post Storm	1999	$27,000	$27,000	$0	$0
MISC Statewide	Destin Post Opal Restoration	1999	$118,800	$118,800	$52,200	$52,200
MISC Statewide	Development of a Post-Storm Foundation	1999	$8,114		$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1999	$30,342		$0	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	1999	$8,016		$0	$0
		TOTAL	$192,272	$145,800	$52,200	$52,200

2000

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Hurricane Opal Recovery Plan (UF)	2000	$47,982		$698	$0
MISC Statewide	Hurricane Opal Recovery Plan (UF)	2000	$10,000		$0	$0
		TOTAL	$57,982	$0	$698	$0

2001

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Destin Hurricane Opal	2001	$84,905	$205,106	$0	$0
MISC Statewide	ES/Impl. Post-Opal Recovery	2001	$28,109	$28,109	$0	$0
MISC Statewide	Franklin Co. - Hurr. Opal, George, & Earl	2001	$50,469	$79,999	$50,469	$79,896
MISC Statewide	OK/Strategic Management Plan	2001	$195,737		$344,444	$428,262
MISC Statewide	Santa Rosa County - Hurricane Opal	2001	$146,639	$146,639	$0	$0
MISC Statewide	South County Post-Storm Beach Condition Stu	2001	$0			
MISC Statewide	Walton County Hurricane Opal	2001	$137,181		$0	$0
MISC Statewide	Walton County Post-Opal Restoration	2001	$277,826	$277,826	$0	$0
NE Atlantic Coast	South Amelia Island MOA	2001	$4,957	$4,957	$0	$0
		TOTAL	$925,823	$742,636	$394,913	$508,158

2002

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Destin Hurricane Opal	2002	$120,201		$0	$0
MISC Statewide	Franklin Co. - Hurr. Opal, George, & Earl	2002	$29,530		$29,427	$0
MISC Statewide	Lovers Key Emergency Berm Installation	2002	$4,573	$4,573	$0	$0
MISC Statewide	OK/Strategic Management Plan	2002	$12,944		$83,818	$0
MISC Statewide	St. Lucie Post-Storm Study	2002	$22,561	$22,561	$67,282	$67,282
MISC Statewide	Walton County Hurricane Opal	2002	$178,115	$315,296	$0	$0
MISC Statewide	Walton County Hurricane Opal	2002	$59,651		$0	$0
		TOTAL	$427,575	$342,430	$180,527	$67,282

1992

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Sea Turtle Study	1992	27480	$49,998	$0	$0
		TOTAL	27480	$49,998	$0	$0

1993

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Beach Access Study DEP U of F	1993	$9,889	$100,429	$0	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1993	$49,726	$496,249	$16,575	$0
MISC Statewide	Sebastian Turbidity Monitoring	1993	43750	$43,750	$14,434	$14,434
		TOTAL	$103,365	$640,428	$31,009	$14,434

1994

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Beach Access Study DEP U of F	1994	$90,540		$0	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1994	$85,385		$28,428	$0
		TOTAL	$175,925	$0	$28,428	$0

1995

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1995	$105,782		$35,260	$0
		TOTAL	$105,782	$0	$35,260	$0

1996

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1996	$32,072	$441,598	$0	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1996	$99,853		$29,415	$0
		TOTAL	$131,925	$441,598	$29,415	$0

1997

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1997	$60,798		$0	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1997	$16,676		$5,765	$0
		TOTAL	$77,474	$0	$5,765	$0

1998

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1998	$152,005		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1998	$13,163		$0	$0
MISC Statewide	Stump Pass Evacuation Study	1998	38500	$132,000	$0	$0
		TOTAL	$203,668	$132,000	$0	$0

1999

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1999	$25,073		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	1999	$7,869		$0	$0
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	1999	$102,026		$123,008	$0
MISC Statewide	Stump Pass Evacuation Study	1999	61000		$0	$0
		TOTAL	$195,968	$0	$123,008	$0

2000

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Beach Management Workshop Series (FSU)	2000	$63,725	$63,725	$0	$0
MISC Statewide	Central Miami Beach Erosion Hotspot Control Proje	2000	$250,000	$250,000	$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	2000	$39,531		$0	$0
MISC Statewide	Dade Co. Beach Rehibilitation Monitoring	2000	$111,087		$0	$0
MISC Statewide	Derelict Vessel - Watson Bayou	2000	$150,000	$150,000	$12,500	$12,500
MISC Statewide	Design Guidelines (UF)	2000	$15,000	$15,000	$0	$0
MISC Statewide	Honeymoon Isl.C'way Feasibility	2000	$27,368	$49,760	$6,842	$12,440
MISC Statewide	Midtown PEP Monitoring (Palm Beach)	2000	$36,801		$60,123	$298,574
MISC Statewide	Regional Sediment Management (USACE)	2000	$25,000	$25,000	$0	$0
MISC Statewide	Study of Alt. Beach Materials	2000	55075	$87,488	$0	$0
MISC Statewide	Stump Pass Evacuation Study	2000	32500		$0	$0
		TOTAL	$806,087	$640,973	$79,465	$323,514

2001

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Alligator Point Feasibility Study	2001	$50,469	$89,785	$0	$0
MISC Statewide	Central Miami Bch Erosion Hotspot	2001	$250,000	$250,000	$0	$0
MISC Statewide	Dev of Research Plan	2001	$30,000	$30,000	$0	$0
MISC Statewide	Eglin Experimental Groins	2001	$209,087	$300,780	$0	$0
MISC Statewide	Honeymoon Isl.C'way Feasibility	2001	$22,392		$5,598	$0
MISC Statewide	Study of Alt. Beach Materials	2001	32413		$0	$0
MISC Statewide	UF Des. Watercraft Hydro surveying	2001	73064	$73,064	$0	$0
		TOTAL	$667,425	$743,629	$5,598	$0

2002

Region	Project Name	FY Spent	Spent	Funded Total	Local Spent	Local Funded
MISC Statewide	Aerial Photography Services	2002	44490	$44,490.00	$0	$0
MISC Statewide	Alligator Point Feasibility Study	2002	$29,427		$0	$0
MISC Statewide	Eglin Experimental Groins	2002	$91,693		$0	$0
MISC Statewide	Ft. Clinch Amelia Island MOA	2002	$5,000	$5,000	$0	$0
MISC Statewide	Panhandle Sand Search	2002	$313,805	$313,805	$0	$0
		TOTAL	484415	$363,295.00	$0	$0

COE Beach Nour by Year

1992

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Delray Beach	1992	1.95	$3,993,528.00	$2,249,554.00	$1,743,973.00
		TOTAL	0	$3,993,528.00	$2,249,554.00	$1,743,973.00

1993

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1994

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1995

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1996

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
NE Atlantic Coast	Duval Co Shore Protection	1996	5.00	$7,590,000	$4,675,440	$2,914,560
SW Gulf	Lee Co.-Captiva Island	1996	4.70	$5,164,900.00	$1,431,710.00	$3,733,189.00
SW Gulf	Pinellas Co.-Long Key	1996	0.53	$2,511,000.00	$1,526,688.00	$908,982.00
SW Gulf	Pinellas Co.-Treasure Island	1996	0.47	$780,000.00	$450,840.00	$329,160.00
		TOTAL	10.70	$16,045,900	$8,084,678	$7,885,891

1997

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Dade Co.-Gov't Cut to Haulover Bea	1997	1.02	$4,371,301.00	$2,294,933.00	$2,076,367.00
SE Atlantic Coast	Dade co.-Sunny Isles Segment	1997	0.00	$4,371,301.00	$2,235,920.00	$2,135,386.00
		TOTAL	1.02	$8,742,602.00	$4,530,853.00	$4,211,753.00

1998

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Boca Raton	1998	1.45	$2,144,100.00	$1,087,701.00	$1,056,398.00
		TOTAL	1.45	$2,144,100.00	$1,087,701.00	$1,056,398.00

1999

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Dade Co.-Gov't Cut to Haulover Bea	1999	1.32	$8,315,837.00	$4,141,062.00	$4,174,550.00
SW Gulf	Pinellas Co.-Sand Key	1999	7.00	$12,500,000.00	$7,400,000.00	$5,100,000.00
Central Atlantic Coast	Fort Pierce Beach Shore Protection F	1999	1.30	$6,031,000.00	$2,817,683.00	$3,213,316.00
		TOTAL	9.62	$26,846,837.00	$14,358,745.00	$12,487,866.00

2000

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SW Gulf	Pinellas Co.-Long Key	2000	0.53	$3,000,000.00	$1,824,000.00	$1,176,000.00
SW Gulf	Pinellas Co.-Treasure Island	2000	2.00	$2,000,000.00	$1,156,000.00	$844,000.00
FLORIDA KEYS	Monroe Co.	2000	0.08	$212,025.00		$212,025.00
		TOTAL	2.61	$5,212,025.00	$2,980,000.00	$2,232,025.00

2001

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Dade co.-Sunny Isles Segment	2001	2.90	$18,212,000.00	$9,315,438.00	$8,896,562.00
Central Atlantic Coast	Martin Co	2001	3.75	$7,935,000.00	$3,696,916.00	$4,238,083.00
		TOTAL	6.65	$26,147,000.00	$13,012,354.00	$13,134,645.00

2002

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

COE Beach Rest by Year

1992

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1993

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SW Gulf	Manatee Co. Shore Protection Projec	1993	4.70	$5,912,537	$3,321,072	$2,591,464
SW Gulf	Pinellas Co.-Sand Key	1993	7.90	$31,528,000	$18,664,576	$12,863,424
		TOTAL	12.60	$37,440,537	$21,985,648	$15,454,888

1994

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1995

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Jupiter/Carlin	1995	1.10	$2,274,400	$1,244,324	$1,030,075
		TOTAL	1.10	$2,274,400	$1,244,324	$1,030,075

1996

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
Central Atlantic Coast	Martin Co. Shore Protection Project	1996	3.75	$8,625,000	$4,018,387	$4,606,612
SW Gulf	Sarasota Co. Shore Protection Projec	1996	3.20	$15,031,601	$10,905,426	$4,126,176
		TOTAL	6.95	$23,656,601	$14,923,813	$8,732,788

1997

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SW Gulf	Venice Dune Restoration	1997		$310,000		$310,000
		TOTAL	0	$310,000	$0	$310,000

1998

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Ocean Ridge	1998	1.40	$4,428,068	$2,665,696	$1,762,371
		TOTAL	1.40	$4,428,068	$2,665,696	$1,762,371

1999

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
Panhandle Gulf	Bay Co.-Panama City Beaches	1999	16.30	$21,200,000	$11,978,000	$9,222,000
		TOTAL	16.30	$21,200,000	$11,978,000	$9,222,000

2000

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
Central Atlantic Coast	Brevard Co. Shore Protection-North R	2000	9.40	$22,628,432	$14,052,256	$8,576,175
Central Atlantic Coast	Brevard Co.-Shore Protection-South I	2000	3.40	$15,032,000	$8,463,016	$6,568,984
SE Atlantic Coast	Monroe Co.-Key West	2000	0.47	$1,010,208		$1,010,208
		TOTAL	13.27	$38,670,640	$22,515,272	$16,155,367

2001

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

2002

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

COE Beach Rest by Year

1992

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1993

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SW Gulf	Manatee Co. Shore Protection Projec	1993	4.70	$5,912,537	$3,321,072	$2,591,464
SW Gulf	Pinellas Co.-Sand Key	1993	7.90	$31,528,000	$18,664,576	$12,863,424
		TOTAL	12.60	$37,440,537	$21,985,648	$15,454,888

1994

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

1995

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Jupiter/Carlin	1995	1.10	$2,274,400	$1,244,324	$1,030,075
		TOTAL	1.10	$2,274,400	$1,244,324	$1,030,075

1996

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
Central Atlantic Coast	Martin Co. Shore Protection Project	1996	3.75	$8,625,000	$4,018,387	$4,606,612
SW Gulf	Sarasota Co. Shore Protection Projec	1996	3.20	$15,031,601	$10,905,426	$4,126,176
		TOTAL	6.95	$23,656,601	$14,923,813	$8,732,788

1997

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SW Gulf	Venice Dune Restoration	1997		$310,000		$310,000
		TOTAL	0	$310,000	$0	$310,000

1998

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
SE Atlantic Coast	Palm Beach Co.-Ocean Ridge	1998	1.40	$4,428,068	$2,665,696	$1,762,371
		TOTAL	1.40	$4,428,068	$2,665,696	$1,762,371

1999

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
Panhandle Gulf	Bay Co.-Panama City Beaches	1999	16.30	$21,200,000	$11,978,000	$9,222,000
		TOTAL	16.30	$21,200,000	$11,978,000	$9,222,000

2000

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
Central Atlantic Coast	Brevard Co. Shore Protection-North R	2000	9.40	$22,628,432	$14,052,256	$8,576,175
Central Atlantic Coast	Brevard Co.-Shore Protection-South I	2000	3.40	$15,032,000	$8,463,016	$6,568,984
SE Atlantic Coast	Monroe Co.-Key West	2000	0.47	$1,010,208		$1,010,208
		TOTAL	13.27	$38,670,640	$22,515,272	$16,155,367

2001

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

2002

Region	Project Name	Year(s)	Miles	Total	Federal	Non-Federal
		TOTAL	0	0	0	0

DEP Beach Restoration & Nourishment Data

FY Spent	Spent	Funded Total	Local Spent	Local Funded
1992	$8,553,106	$14,493,778	$4,690,803	$19,408,403
1993	$1,990,148	$1,310,519	$1,423,334	$20,450
1994	$5,150,570	$3,714,160	$7,559,992	$7,886,013
1995	$3,980,083	$4,562,000	$1,878,628	$1,632,158
1996	$5,005,189	$5,976,574	$555,900	$771,437
1997	$6,474,117	$18,211,685	$152,994	$414,182
1998	$4,516,565	$4,053,133	$5,794,975	$0
1999	$16,514,683	$8,071,980	$6,333,324	$6,320,378
2000	$5,475,630	$26,329,918	$7,251,328	$22,935,034
2001	$14,317,473	$32,545,978	$13,669,385	$4,164,017
2002	$15,030,696	$19,464,287	$19,573,863	$8,526,769
TOTAL	$87,008,260	$138,734,012	$68,884,526	$72,078,841

DEP, All Regions by Years

FY Spent	Spent	Funded Total	Local Spent	Local Funded
1992	$9,378,461	$15,661,999	$4,901,509	$19,873,877
1993	$2,514,046	$3,846,784	$1,611,853	$1,247,904
1994	$7,842,102	$6,276,586	$8,046,551	$13,546,007
1995	$5,355,600	$5,926,960	$2,392,907	$2,439,058
1996	$6,107,673	$8,142,938	$957,309	$1,753,474
1997	$7,559,571	$18,370,935	$1,857,776	$527,852
1998	$6,980,762	$8,097,219	$11,114,911	$3,066,970
1999	$19,590,867	$10,891,095	$9,098,661	$6,772,578
2000	$11,552,331	$27,134,895	$12,861,398	$28,089,156
2001	$18,789,923	$37,192,636	$16,265,832	$6,297,366
2002	$17,934,750	$20,582,080	$20,999,537	$10,015,939
TOTAL	$113,606,086	$162,124,126	$90,108,244	$93,630,181

DEP Inlet Activities Data

FY Spent	Spent	Funded Total	Local Spent	Local Funded
1992	$797,875	$1,118,223	$210,706	$465,474
1993	$410,644	$1,795,408	$157,510	$1,213,020
1994	$1,851,189	$1,963,548	$458,131	$5,659,994
1995	$1,244,735	$1,364,960	$479,019	$806,900
1996	$843,559	$1,597,766	$371,994	$982,037
1997	$983,481	$159,250	$1,699,017	$113,670
1998	$1,827,972	$3,141,895	$5,319,936	$3,066,970
1999	$2,687,944	$2,673,315	$2,590,129	$400,000
2000	$5,212,632	$164,004	$5,529,907	$4,830,608
2001	$2,879,202	$3,160,393	$2,195,936	$1,625,191
2002	$1,992,064	$412,068	$1,245,147	$1,421,888
TOTAL	$20,731,297	$17,550,830	$20,257,432	$20,585,752

DEP Post Storm Data

FY Spent	Spent	Funded Total	Local Spent	Local Funded
1992	$0	$0	$0	$0
1993	$9,889	$100,429	$0	$0
1994	$664,418	$598,878	$0	$0
1995	$25,000	$0	$0	$0
1996	$127,000	$127,000	$0	$0
1997	$24,499	$0	$0	$0
1998	$432,557	$770,191	$0	$0
1999	$192,272	$145,800	$52,200	$52,200
2000	$57,982	$0	$698	$0
2001	$925,823	$742,636	$394,913	$508,158
2002	$427,575	$342,430	$180,527	$67,282
TOTAL	$2,887,015	$2,827,364	$628,338	$627,640

DEP Other Data

FY Spent	Spent	Funded Total	Local Spent	Local Funded
1992	27480	$49,998	$0	$0
1993	$103,365	$640,428	$31,009	$14,434
1994	$175,925	$0	$28,428	$0
1995	$105,782	$0	$35,260	$0
1996	$131,925	$441,598	$29,415	$0
1997	$77,474	$0	$5,765	$0
1998	$203,668	$132,000	$0	$0
1999	$195,968	$0	$123,008	$0
2000	$806,087	$640,973	$79,465	$323,514
2001	$667,425	$743,629	$5,598	$0
2002	484415	$363,295.00	$0	$0
TOTAL	$2,979,514	$3,011,921	$337,948	$337,948

COE Maintenance Dredging Data

FY Spent	Disposal	Funded Total	Federal
1992	193,336	$1,933,360	$1,933,360
1993	680,997	$3,294,771	$3,294,771
1994	1,724,570	$25,275,074	$25,275,074
1995	1,643,152	$15,099,210	$15,099,210
1996	1,516,205	$15,626,640	$15,626,640
1997	1,181,926	$13,499,127	$13,499,127
1998	1,323,697	$12,744,663	$12,744,663
1999	1,606,928	$38,938,408	$38,938,408
2000	1,377,800	$20,033,209	$20,033,209
2001	2,120,000	$21,200,000	$21,200,000
2002	628,000	$6,280,000	$6,280,000
TOTAL	13,996,611	$173,924,462	$173,924,462

COE Beach Nourishment Data

FY Spent	Funded Total	Federal	Non-Federal
1992	$3,993,528.00	$2,249,554.00	$1,743,973.00
1993	$0	$0	$0
1994	$0	$0	$0
1995	$0	$0	$0
1996	$16,045,900	$8,084,678	$7,885,891
1997	$8,742,602.00	$4,530,853.00	$4,211,753.00
1998	$2,144,100.00	$1,087,701.00	$1,056,398.00
1999	$26,846,837.00	$14,358,745.00	$12,487,866.00
2000	$5,212,025.00	$2,980,000.00	$2,232,025.00
2001	$26,147,000.00	$13,012,354.00	$13,134,645.00
2002	$0	$0	$0
TOTAL	$89,131,992	$46,303,885	$42,752,551

COE Beach Restoration Data

FY Spent	Funded Total	Federal	Non-Federal
1992	$0	$0	$0
1993	$37,440,537	$21,985,648	$15,454,888
1994	$0	$0	$0
1995	$2,274,400	$1,244,324	$1,030,075
1996	$23,656,601	$14,923,813	$8,732,788
1997	$310,000	$0	$310,000
1998	$4,428,068	$2,665,696	$1,762,371
1999	$21,200,000	$11,978,000	$9,222,000
2000	$38,670,640	$22,515,272	$16,155,367
2001	$0	$0	$0
2002	$0	$0	$0
TOTAL	$127,980,246	$75,312,753	$52,667,489

COE, All Regions by Years

FY Spent	Funded Total	Federal	Non-Federal
1992	$5,926,888	$4,182,914	$1,743,973
1993	$40,735,308	$25,280,419	$15,454,888
1994	$25,275,074	$25,275,074	$0
1995	$17,373,610	$16,343,534	$1,030,075
1996	$55,329,141	$38,635,131	$16,618,679
1997	$22,551,729	$18,029,980	$4,521,753
1998	$19,316,831	$16,498,060	$2,818,769
1999	$86,985,245	$65,275,153	$21,709,866
2000	$63,915,874	$45,528,481	$18,387,392
2001	$47,347,000	$34,212,354	$13,134,645
2002	$6,280,000	$6,280,000	$0
TOTAL	$391,036,700	$295,541,100	$95,420,040

Local & State DEP, All Regions by Years

FY Spent	State Spent	Local Spent
1992	$9,378,461	$4,901,509
1993	$2,514,046	$1,611,853
1994	$7,842,102	$8,046,551
1995	$5,355,600	$2,392,907
1996	$6,107,673	$957,309
1997	$7,559,571	$1,857,776
1998	$6,980,762	$11,114,911
1999	$19,590,867	$9,098,661
2000	$11,552,331	$12,861,398
2001	$18,789,923	$16,265,832
2002	$17,934,750	$20,999,537
TOTAL	$113,606,086	$90,108,244

FY Spent	TOTAL
1992	$14,279,970
1993	$4,125,899
1994	$15,888,653
1995	$7,748,507
1996	$7,064,982
1997	$9,417,347
1998	$18,095,673
1999	$28,689,528
2000	$24,413,729
2001	$35,055,755
2002	$38,934,287
TOTAL	$203,714,330

Local & State DEP Percentage, All Regions by Years

FY Spent	State Spent	Local Spent
1992	66%	34%
1993	61%	39%
1994	49%	51%
1995	69%	31%
1996	86%	14%
1997	80%	20%
1998	39%	61%
1999	68%	32%
2000	47%	53%
2001	54%	46%
2002	46%	54%
TOTAL		

FY Spent	State Spent	Local Spent	TOTAL
1992-1997	$38,757,453	$19,767,905	$58,525,358
1998-2002	$74,848,633	$70,340,339	$145,188,972
TOTAL	$113,606,086	$90,108,244	$203,714,330

FY Spent	State Spent	Local Spent
1992-1997	66%	34%
1998-2002	52%	48%
TOTAL		